

Publications from 1993 to Present by Author/Year/Titled
13 January 2004

- Akimoto, H., H. Mukai, M. Nishikawa, K. Murano, S. Hatakeyama, C.-M. Liu, M. Buhr, K.J. Hsu, D.A. Jaffe, L. Zhang, R. Honrath, J.T. Merrill, and R.E. Newell, Long-range transport of ozone in the east Asian Pacific rim region, *Journal of Geophysical Research*, 101 (D1), 1999-2010, 1996.
- Alexander, M.J., and K.H. Rosenlof, Nonstationary gravity wave forcing of the stratospheric zonal mean wind, *Journal of Geophysical Research*, 101, 23465-23474, 1996.
- Alexander, M.J., and K.H. Rosenlof, Gravity wave forcing in the stratosphere: Observational constraints from UARS and implications for parameterization in global models, *Journal of Geophysical Research*, submitted, 2003.
- Alvarez II, R.J., C.J. Senff, R.M. Hardesty, D.D. Parrish, W.T. Luke, T.B. Watson, P.H. Daum, and N. Gillani, Comparisons of airborne lidar measurements of ozone with airborne in situ measurements during the 1995 Southern Oxidants Study, *Journal of Geophysical Research*, 103 (D23), 31155-31171, 1998.
- Anderson, J., J.M. Russell III, S. Solomon, and L.E. Deaver, Halogen Occultation Experiment confirmation of stratospheric chlorine decreases in accordance with the Montreal Protocol, *Journal of Geophysical Research*, 105 (D4), 4483-4490, 2000.
- Angevine, W.M., S.K. Avery, W.L. Ecklund, and D.A. Carter, Fluxes of heat and momentum measured with a boundary-layer wind profiler radar-acoustic sounding system, *Journal of Applied Meteorology*, 32 (1), 73-80, 1993.
- Angevine, W.M., S.K. Avery, and G.L. Kok, Virtual heat flux measurements from a boundary-layer profiler-RASS compared to aircraft measurements, *Journal of Applied Meteorology*, 32 (12), 1901-1907, 1993.
- Angevine, W.M., A.B. White, and S.K. Avery, Boundary-layer depth and entrainment zone characterization with a boundary-layer profiler, *Boundary-Layer Meteorology*, 68, 375-385, 1994.
- Angevine, W.M., and W.L. Ecklund, Errors in radio acoustic sounding of temperature, *Journal of Atmospheric and Oceanic Technology*, 11 (3), 837-842, 1994.
- Angevine, W.M., W.L. Ecklund, D.A. Carter, K.S. Gage, and K.P. Moran, Improved radio acoustic sounding techniques, *Journal of Atmospheric and Oceanic Technology*, 11 (1), 42-49, 1994.
- Angevine, W.M., R.J. Doviak, and Z. Sorbjan, Remote sensing of vertical velocity variance and surface heat flux in a convective boundary layer, *Journal of Applied Meteorology*, 33 (8), 977-983, 1994.
- Angevine, W.M., and J.I. MacPherson, Comparison of wind profiler and aircraft wind measurements at Chebogue Point, Nova Scotia, *Journal of Atmospheric and Oceanic Technology*, 12 (2), 421-426, 1995.
- Angevine, W.M., M.P. Buhr, J.S. Holloway, M. Trainer, D.D. Parrish, J.I. MacPherson, G.L. Kok, R.D. Schillawski, and D.H. Bowlby, Local meteorological features affecting chemical measurements at a North Atlantic coastal site, *Journal of Geophysical Research*, 101 (D22), 28935-28946, 1996.
- Angevine, W.M., M.K. Trainer, S.A. McKeen, and C.M. Berkowitz, Mesoscale meteorology of the New England coast, Gulf of Maine, and Nova Scotia: Overview, *Journal of Geophysical Research*, 101 (D22), 28893-28901, 1996.
- Angevine, W.M., Errors in mean vertical velocities measured by boundary-layer wind profilers, *Journal of Atmospheric and Oceanic Technology*, 14 (3.1), 565-569, 1997.
- Angevine, W.M., A.W. Grimsdell, S.A. McKeen, and J.M. Warnock, Entrainment results from the Flatland boundary layer experiments, *Journal of Geophysical Research*, 103 (D12), 13689-13701, 1998.
- Angevine, W.M., A.W. Grimsdell, L.M. Hartten, and A.C. Delany, The Flatland boundary-layer experiments, *Bulletin of the American Meteorological Society*, 79, 419-431, 1998.
- Angevine, W.M., P.S. Bakwin, and K.J. Davis, Wind profiler and RASS measurements compared with measurements from a 450-m-tall tower, *Journal of Atmospheric and Oceanic Technology*, 15, 818-825, 1998.
- Angevine, W.M., Entrainment results including advection and case studies from the Flatland boundary layer experiments, *Journal of Geophysical Research*, 104 (D26), 30937-30963, 1999.
- Angevine, W.M., and K. Mitchell, Evaluation of the NCEP Mesoscale Eta Model convective boundary layer for air quality applications, *Monthly Weather Review*, 129, 2761-2775, 2001.
- Angevine, W.M., H.K. Baltink, and F.C. Bosveld, Observations of the morning transition of the convective boundary layer, *Boundary-Layer Meteorology*, 101, 209-227, 2001.
- Angevine, W.A., C.J. Senff, and E.R. Westwater, Boundary Layers/Observational techniques – Remote, *Encyclopedia of Atmospheric Sciences*, 1, 271-279, 2003.

- Angevine, W.M., A.B. White, C.J. Senff, M. Trainer, R.M. Banta, and M.A. Ayoub, Urban-rural contrasts in mixing height and cloudiness over Nashville in 1999, *Journal of Geophysical Research*, 108 (D3), 4092, doi:10.1029/2001JD001061, 2003.
- Apel, E.C., J.G. Calvert, and F.C. Fehsenfeld, The Nonmethane Hydrocarbon Intercomparison Experiment (NOMHICE): Tasks 1 and 2, *Journal of Geophysical Research*, 99 (D8), 16651-16664, 1994.
- Apel, E.C., J.G. Calvert, T.M. Gilpin, F.C. Fehsenfeld, D.D. Parrish, and W.A. Lonneman, The Nonmethane Hydrocarbon Intercomparison Experiment (NOMHICE): Task 3, *Journal of Geophysical Research*, 104 (D21), 26069-26086, 1999.
- Appenzeller, C., J.R. Holton, and K.H. Rosenlof, Seasonal variation of mass transport across the tropopause, *Journal of Geophysical Research*, 101 (D10), 15071-15078, 1996.
- Ariya, P.A., B.T. Jobson, R. Sander, H. Niki, G.W. Harris, J.F. Hopper, and K.G. Analau, Measurements of C₂-C₇ hydrocarbons during the Polar Sunrise Experiment 1994: Further evidence for halogen chemistry in the troposphere, *Journal of Geophysical Research*, 103 (D11), 13169-13180, 1998.
- Arpag, K.H., P.V. Johnston, H.L. Miller, R.W. Sanders, and S. Solomon, Observations of the stratospheric BrO column over Colorado, 40°N, *Journal of Geophysical Research*, 99 (D4), 8175-8181, 1994.
- Atherton, C.S., S. Grotch, D.D. Parrish, J.E. Penner, and J.J. Walton, The role of anthropogenic emissions of NO_x on tropospheric ozone over the North Atlantic Ocean: A three-dimensional, global model study, *Atmospheric Environment*, 30 (10/11), 1739-1749, 1996.
- Atlas, E., B. Ridley, J. Walega, J. Greenberg, G. Kok, T. Staffelbach, S. Schauffler, J. Lind, G. Hübner, R. Norton, GTE PEM-West Science Team, E. Dlugokencky, J. Elkins, S. Oltmans, G. Mackay, and D. Karecki, A comparison of aircraft and ground-based measurements at Mauna Loa Observatory, Hawaii, during GTE PEM-West and MLOPEX 2, *Journal of Geophysical Research*, 101 (D9), 14599-14612, 1996.
- Atlas, D., C.W. Ulbrich, F.D. Mark, Jr., E. Amitai, and C.R. Williams, Systematic variation of drop size and radar-rainfall relations, *Journal of Geophysical Research*, 104 (D6), 6155-6169, 1999.
- Atlas, D., and C.R. Williams, The anatomy of a continental tropical convective storm, *Journal of the Atmospheric Sciences*, 60 (1), 3-15, 2003.
- Atlas, D., and C.R. Williams, Radar echoes from lightning and their microphysical environment, *Geophysical Research Letters*, 30 (5), 1262, doi:10.1029/2002GL016521, 2003.
- Avallone, L.M., D.W. Toohey, M.H. Proffitt, J.J. Margitan, K.R. Chan, and J.G. Anderson, In situ measurements of ClO at midlatitudes: Is there an effect from Mt. Pinatubo?, *Geophysical Research Letters*, 20 (22), 2519-2522, 1993.
- Bacmeister, J.T., S.D. Eckermann, P.A. Newman, L. Lait, K.R. Chan, M. Loewenstein, M.H. Proffitt, and B.L. Gary, Stratospheric horizontal wavenumber spectra of winds, potential temperature, and atmospheric tracers observed by high-altitude aircraft, *Journal of Geophysical Research*, 101, 9441-9470, 1996.
- Bais, A.F., S. Madronich, J.H. Crawford, S.R. Hall, B. Mayer, M. VanWeele, J. Lenoble, J.G. Calvert, C.A. Cantrell, R.E. Shetter, A. Hofzumahaus, P. Koepke, P.S. Monks, G.J. Frost, R. McKenzie, N. Krotkov, A. Kylling, S.A. Lloyd, W.H. Swartz, G. Pfister, T.J. Martin, E.-P. Roeth, e. Griffioen, A. Ruggaber, M. Krol, A. Kraus, G.D. Edwards, M. Mueller, B. Lefer, P.E. Johnston, H. Schwander, D. Flittner, B.G. Gardiner, J.D. Barrick, and R. Schmitt, International photolysis frequency measurement and model intercomparison: Spectral actinic solar flux measurements and modeling, *Journal of Geophysical Research*, submitted, 2002.
- Banta, R.M., C.J. Senff, A.B. White, M. Trainer, R.T. McNider, R.J. Valente, S.D. Mayor, R.J. Alvarez II, R.M. Hardesty, D. Parrish, and F.C. Fehsenfeld, Daytime buildup and nighttime transport of urban ozone in the boundary layer during a stagnation episode, *Journal of Geophysical Research*, 103 (D17), 22519-22544, 1998.
- Barone, S.B., A.A. Turnipseed, and A.R. Ravishankara, Kinetics of the reactions of CF₃O radical with alkanes, *Journal of Physical Chemistry*, 98 (17), 4602-4608, 1994.
- Barone, S.B., A.A. Turnipseed, T. Gierczak, and A.R. Ravishankara, Quantum yields of H(²S) and CH₃S(²E) from the photolysis of simple organosulfur compounds at 193, 222, and 248 nm, *Journal of Physical Chemistry*, 98, 11969-11977, 1994.
- Barone, S.B., A.A. Turnipseed, and A.R. Ravishankara, Role of adducts in the atmospheric oxidation of dimethyl sulfide, *Faraday Discussions of the Chemical Society*, 100, 39-54, 1995.
- Barone, S.B., A.A. Turnipseed, and A.R. Ravishankara, Reaction of OH with dimethyl sulfide (DMS): 1, Equilibrium constant for OH + DMS reaction and the kinetics of the OH-DMS + O₂ reaction, *Journal of Physical Chemistry*, 100, 14694-14702, 1996.
- Barraglia, A., C. Kummerow, D.-B. Shin, and C.R. Williams, Constraining microweave brightness temperatures by radar brightband observations, *Journal of Atmospheric and Oceanic Technology*, 20, 856-871, 2003.
- Battin-Leclerc, F., I.K. Kim, R.K. Talukdar, R.W. Portmann, A.R. Ravishankara, R. Steckler, and D. Brown, Rate coefficients for the reactions of OH and OD with HCl and DCI between 200 and 400 K, *Journal of Physical Chemistry A*, 103 (17), 3237-3244,

1999.

- Baumann, K., E.J. Williams, J.A. Olson, J.H. Harder, and F.C. Fehsenfeld, Meteorological characteristics and spatial extent of upslope events during the 1993 Tropospheric OH Photochemistry Experiment, *Journal of Geophysical Research*, 102 (D5), 6199-6213, 1997.
- Baumann, K., E.J. Williams, W.M. Angevine, J.M. Roberts, R.B. Norton, G.J. Frost, F.C. Fehsenfeld, S.R. Springston, K. Olszyna, and S.B. Bertman, Ozone production and transport near Nashville, Tennessee: Results from the 1994 study at New Hendersonville, *Journal of Geophysical Research*, 105 (D7), 9137-9153, 2000.
- Bertman, S.B., M.P. Buhr, and J.M. Roberts, Automated cryogenic trapping technique for capillary GC analysis of atmospheric trace compounds requiring no expendable cryogens: Application to the measurement of organic nitrates, *Analytical Chemistry*, 98 (20), 2944-2946, 1993.
- Bertman, S.B., J.M. Roberts, D.D. Parrish, M.P. Buhr, P.D. Goldan, W.C. Kuster, F.C. Fehsenfeld, S.A. Montzka, and H. Westberg, Evolution of alkyl nitrates with air mass age, *Journal of Geophysical Research*, 100 (D11), 22805-22813, 1995.
- Bevilacqua, T.J., D.R. Hanson, and C.J. Howard, Chemical ionization mass spectrometric studies of the gas-phase reactions $\text{CF}_3\text{O}_2 + \text{NO}$, $\text{CF}_3\text{O} + \text{NO}$, and $\text{CF}_3\text{O} + \text{RH}$, *Journal of Physical Chemistry*, 97, 3750-3757, 1993.
- Beyer, K.D., A.R. Ravishankara, and E.R. Lovejoy, Measurements of UV refractive indices and densities of $\text{H}_2\text{SO}_4/\text{H}_2\text{O}$ and $\text{H}_2\text{SO}_4/\text{HNO}_3/\text{H}_2\text{O}$ solutions, *Journal of Geophysical Research*, 101 (D9), 14519-14524, 1996.
- Bitelli, M., L.J. Gray, J.E. Harries, J.M. Russell III, and A.F. Tuck, Synoptic interpretation of measurements from HALOE, *Journal of the Atmospheric Sciences*, 51 (20), 2942-2956, 1994.
- Borrmann, S., J.E. Dye, D. Baumgardner, M.H. Proffitt, J.J. Margitan, J.C. Wilson, H.H. Jonsson, C.A. Brock, M. Loewenstein, J.R. Podolske, and G.V. Ferry, Aerosols as dynamical tracers in the lower stratosphere: Ozone versus aerosol correlation after the Mount Pinatubo eruption, *Journal of Geophysical Research*, 100, 11147-11156, 1995.
- Borrmann, S., S. Solomon, J.E. Dye, and B. Luo, The potential of cirrus clouds for heterogeneous chlorine activation, *Geophysical Research Letters*, 23 (16), 2133-2136, 1996.
- Borrmann, S., S. Solomon, J.E. Dye, D. Baumgardner, K.K. Kelly, and K.R. Chan, Heterogeneous reactions on stratospheric background aerosols, volcanic sulfuric acid droplets, and type I polar stratospheric clouds: Effects of temperature fluctuations and differences in particle phase, *Journal of Geophysical Research*, 102 (D3), 3639-3648, 1997.
- Borrmann, S., S. Solomon, L. Avallone, D. Toohey, and D. Baumgardner, On the occurrence of ClO in cirrus clouds and volcanic aerosol in the tropopause region, *Geophysical Research Letters*, 24, 2011-2014, 1997.
- Braban, C.F., J.P.D. Abboatt, and D.J. Cziczo, Deliquescence of ammonium sulfate particles at sub-eutectic temperatures, *Geophysical Research Letters*, 28 (20), 3879-3882, 2001.
- Brasseur, G.P., D.A. Hauglustaine, S. Walters, P.J. Rasch, J.-F. Müller, C. Granier, and X.X. Tie, MOZART, a global chemical transport model for ozone and related chemical tracers: 1, Model description, *Journal of Geophysical Research*, 103 (D21), 28265-28289, 1998.
- Brasseur, G.P., J.T. Kiehl, J.-F. Müller, T. Schneider, C. Granier, X.X. Tie, and D. Hauglustaine, Past and future changes in global tropospheric ozone: Impact on radiative forcing, *Geophysical Research Letters*, 25 (20), 3807-3810, 1998.
- Brault, J.W., New approach to high-precision Fourier transform spectrometer design, *Applied Optics*, 35 (16), 2891-2896, 1996.
- Brock, C.A., F. Schröder, B. Kärcher, A. Petzold, R. Busen, and M. Fiebig, Ultrafine particle size distributions measured in aircraft exhaust plumes, *Journal of Geophysical Research*, 105 (D21), 26555-26567, 2000.
- Brock, C.A., R.A. Washenfelder, M. Trainer, T.B. Ryerson, J.C. Wilson, J.M. Reeves, L.G. Huey, J.S. Holloway, D.D. Parrish, G. Hübler, and F.C. Fehsenfeld, Particle growth in the plumes of coal-fired power plants, *Journal of Geophysical Research*, 107 (D12), 4155, doi:10.1029/2001JD001062, 2002.
- Brock, C.A., M. Trainer, T.B. Ryerson, J.A. Neuman, D.D. Parrish, J.S. Holloway, D.K. Nicks, Jr., G.J. Frost, G. Hübler, F.C. Fehsenfeld, J.C. Wilson, J.M. Reeves, B.G. Lafleur, H. Hilbert, E.L. Atlas, S.G. Donnelly, S.M. Schauffler, V.R. Stroud, and C. Wiedinmyer, Particle growth in urban and industrial plumes in Texas, *Journal of Geophysical Research*, 108 (D3), 4111, doi:10.1029/2002JD002746, 2003.
- Brooks, S.D., D. Baumgardner, B. Gandrud, J.E. Dye, M.J. Northway, D.W. Fahey, T.P. Bui, O.B. Toon, and M.A. Tolbert, Measurements of large stratospheric particles in the Arctic polar vortex, *Journal of Geophysical Research*, 108 (D20), 4652, doi:10.1029/2002JD003278, 2003.
- Browell, E.V., M.A. Fenn, C.F. Butler, W.B. Grant, J.T. Merrill, R.E. Newell, J.D. Bradshaw, S.T. Sandholm, B.E. Anderson, A.R. Bandy, A.S. Bachmeier, D.R. Blake, D.D. Davis, G.L. Gregory, B.G. Heikes, Y. Kondo, S.C. Liu, F.S. Rowland, G.W. Sache, H.B. Singh, R.W. Talbot, and D.C. Thornton, Large-scale air mass characteristics observed over western Pacific during summertime, *Journal of Geophysical Research*, 101 (D1), 1691-1712, 1996.

- Brown, S.S., R.K. Talukdar, and A.R. Ravishankara, Rate constants for the reaction OH + NO₂ + M → HNO₃ + M under atmospheric conditions, *Chemical Physics Letters*, 299, 277-284, 1999.
- Brown, S.S., R.K. Talukdar, and A.R. Ravishankara, Reconsideration of the rate constant for the reaction of hydroxyl radicals with nitric acid, *Journal of Physical Chemistry A*, 103 (16), 3031-3037, 1999.
- Brown, S.S., R.W. Wilson, and A.R. Ravishankara, Absolute intensities for third and fourth overtone absorptions in HNO₃ and H₂O₂ measured by cavity ring down spectroscopy, *Journal of Physical Chemistry A*, 104 (21), 4976-4983, 2000.
- Brown, S.S., A.R. Ravishankara, and H. Stark, Simultaneous kinetics and ring-down: Rate coefficients from single cavity loss temporal profiles, *The Journal of Physical Chemistry A*, 104 (30), 7044-7052, 2000.
- Brown, S.S., H. Stark, S.J. Ciciora, and A.R. Ravishankara, In-situ measurement of atmospheric NO₃ and N₂O₅ via cavity ring-down spectroscopy, *Geophysical Research Letters*, 28 (17), 3227-3230, 2001.
- Brown, S.S., J.B. Burkholder, R.K. Talukdar, and A.R. Ravishankara, Reaction of hydroxyl radical with nitric acid: Insights into its mechanism, *Journal of Physical Chemistry*, 105 (9), 1605-1614, 2001.
- Brown, S.S., H. Stark, and A.R. Ravishankara, Cavity ring-down spectroscopy for atmospheric trace gas detection: Application to the nitrate radical (NO₃), *Applied Physics B: Laser and Optics*, 75, DOI: 10.1007/s00340-002-0980-y, pp. 173-182, 2002.
- Brown, S.S., H. Stark, S.J. Ciciora, R.J. McLaughlin, and A.R. Ravishankara, Simultaneous in situ detection of atmospheric NO₃ and N₂O₅ via cavity ring-down spectroscopy, *Reviews of Scientific Instruments*, 73 (9), 3291-3301, 2002.
- Brown, S.S., Absorption spectroscopy in high finesse cavities for atmospheric studies, *Chemical Reviews*, 2003.
- Brown, S.S., H. Stark, and A.R. Ravishankara, Applicability of the steady state approximation to the interpretation of atmospheric observations of NO₃ and N₂O₅, *Journal of Geophysical Research*, 108 (D17), 4539, doi:10.1029/2003JD003407, 2003.
- Brown, S.S., H. Stark, T.B. Ryerson, E.J. Williams, D.K. Nicks, Jr., M. Trainer, F.C. Fehsenfeld, and A.R. Ravishankara, Nitrogen oxides in the nocturnal boundary layer: Simultaneous in situ measurements of NO₃, N₂O₅, NO₂, NO, and O₃, *Journal of Geophysical Research*, 108 (D9), 4299, doi:10.1029/2002JD002917, 2003.
- Buhr, S.M., M.P. Buhr, F.C. Fehsenfeld, J.S. Holloway, U. Karst, R.B. Norton, D.D. Parrish, and R.E. Sievers, Development of semi-continuous method for the measurement of nitric acid vapor and particulate nitrate and sulfate, *Atmospheric Environment*, 29 (19), 2609-2624, 1995.
- Buhr, M., D. Parrish, J. Elliot, J. Holloway, J. Carpenter, P. Goldan, W. Kuster, M. Trainer, S. Montzka, S. McKeen, and F. Fehsenfeld, Evaluation of ozone precursor source types using principal component analysis of ambient air measurements in rural Alabama, *Journal of Geophysical Research*, 100 (D11), 22853-22860, 1995.
- Buhr, M., D. Sueper, M. Trainer, P. Goldan, B. Kuster, F. Fehsenfeld, G. Kok, R. Shillawski, and A. Schanot, Trace gas and aerosol measurements using aircraft data from the North Atlantic Regional Experiment (NARE 1993), *Journal of Geophysical Research*, 101 (D22), 29013-29027, 1996.
- Buhr, M.P., K.-J. Hsu, S.C. Liu, R. Liu, L. Wei, Y.-C. Liu, and Y.-S. Kuo, Trace gas measurements and air mass classification from a ground station in Taiwan during the PEM-West A experiment (1991), *Journal of Geophysical Research*, 101 (D1), 2025-2035, 1996.
- Burkholder, J.B., R.L. Mauldin, III, R.J. Yokelson, S. Solomon, and A.R. Ravishankara, Kinetic, thermochemical, and spectroscopic study of Cl₂O₃, *Journal of Physical Chemistry*, 97, 7597-7605, 1993.
- Burkholder, J.B., R.K. Talukdar, A.R. Ravishankara, and S. Solomon, Temperature dependence of the HNO₃ UV absorption cross sections, *Journal of Geophysical Research*, 98 (D12), 22937-22948, 1993.
- Burkholder, J.B., Ultraviolet absorption spectrum of HOCl, *Journal of Geophysical Research*, 98 (D2), 2963-2974, 1993.
- Burkholder, J.B., R.K. Talukdar, and A.R. Ravishankara, Temperature dependence of the ClONO₂ UV absorption spectrum, *Geophysical Research Letters*, 21 (7), 585-588, 1994.
- Burkholder, J.B., and R.K. Talukdar, Temperature dependence of the ozone absorption spectrum over the wavelength range 410 to 760 nm, *Geophysical Research Letters*, 21 (7), 581-584, 1994.
- Burkholder, J.B., A.R. Ravishankara, and S. Solomon, UV/visible and IR absorption cross sections of BrONO₂, *Journal of Geophysical Research*, 100 (D8), 16793-16800, 1995.
- Burkholder, J.B., Rate coefficient for the reaction: Br + Br₂O → Br₂ + BrO, *International Journal of Chemical Kinetics*, 30 (8), 571-576, 1997.
- Burkholder, J.B., and S.A. McKeen, UV absorption cross sections for SO₃, *Geophysical Research Letters*, 24 (24), 3201-3204, 1997.
- Burkholder, J.B., and J.J. Orlando, Rate coefficient upper limits for the BrONO₂ and ClONO₂ + O₃ reactions, *Geophysical Research Letters*, 25 (19), 3567-3569, 1998.

- Burkholder, J.B., NO₃ yield in the O(³P) + BrONO₂ reaction, *Journal of Physical Chemistry*, 104 (29), 6733-6737, 2000.
- Burkholder, J.B., and A.R. Ravishankara, Rate coefficient for the reaction: O + NO₂ + M --> NO₃ + M, *Journal of Physical Chemistry A*, 104 (29), 6752-6757, 2000.
- Burkholder, J.B., M. Mills, and S.A. McKeen, Upper limit for the UV absorption cross sections of H₂SO₄, *Geophysical Research Letters*, 27 (16), 2493-2496, 2000.
- Burkholder, J.B., and J.J. Orlando, UV absorption cross sections of *cis*-BrONO, *Chemical Physics Letters*, 317, 603-608, 2000.
- Burkholder, J.B., G. Knight, and J.J. Orlando, UV absorption spectrum of BrOCl, *Journal of Photochemistry and Photobiology*, 134, 133-137, 2000.
- Burkholder, J.B., M.K. Gilles, T. Gierczak, and A.R. Ravishankara, The atmospheric degradation of 1-bromopropane (CH₃CH₂CH₂Br): The photochemistry of bromoacetone, *Geophysical Research Letters*, 29 (17), doi:10.1029/2002GL014712, 2002.
- Burkholder, J.B., J. Curtius, A.R. Ravishankara, and E.R. Lovejoy, Laboratory studies of the homogeneous nucleation of iodine oxides, *Atmospheric Chemistry and Physics*, submitted, 2003.
- Burnett, E.B., and C.R. Burnett, Enhanced production of stratospheric OH from methane oxidation at elevated reactive chlorine levels in northern midlatitudes, *Journal of Atmospheric Chemistry*, 21, 13-41, 1995.
- Burnett, C.R., and E.B. Burnett, The regime of decreased OH vertical column abundances at Fritz Peak Observatory, Colorado: 1991-1995, *Geophysical Research Letters*, 23 (15), 1925-1927, 1996.
- Burnett, C.R., and K. Minschwaner, Continuing development in the regime of decreased atmospheric column OH at Fritz Peak, Colorado, *Geophysical Research Letters*, 25 (9), 1313-1316, 1998.
- Cantrell, C.A., R.E. Shetter, J.A. Lind, A.H. McDaniel, J.G. Calvert, D.D. Parrish, F.C. Fehsenfeld, M.P. Buhr, and M. Trainer, An improved chemical amplifier technique for peroxy radical measurements, *Journal of Geophysical Research*, 98 (D2), 2897-2909, 1993.
- Cantrell, C.A., R.E. Shetter, J.G. Calvert, D.D. Parrish, F.C. Fehsenfeld, P.D. Goldan, W. Kuster, E.J. Williams, H.H. Westberg, G. Allwine, and R. Martin, Peroxy radicals as measured in ROSE and estimated from photostationary state deviations, *Journal of Geophysical Research*, 98 (D10), 18355-18366, 1993.
- Cantrell, C.A., R.E. Shetter, J.G. Calvert, F.L. Eisele, E.J. Williams, K. Baumann, W.H. Brune, P.S. Stevens, and J.H. Mather, Peroxy radicals from photostationary state deviations and steady state calculations during the Tropospheric OH Photochemistry Experiment at Idaho Hill, Colorado, 1993, *Journal of Geophysical Research*, 102 (D5), 6369-6378, 1997.
- Carslaw, K.S., J.A. Kettleborough, M.J. Northway, S. Davies, R.S. Gao, D.W. Fahey, D.G. Baumgardner, M.P. Chipperfield, and A. Kleinböhl, A vortex-scale simulation of the growth and sedimentation of large nitric acid hydrate particles, *Journal of Geophysical Research*, 107 (D20), 8300 doi:10.1029/2001JD000467, 2002.
- Carter, D.A., K.S. Gage, W.L. Ecklund, W.M. Angevine, P.E. Johnston, A.C. Riddle, J. Wilson, and C.R. Williams, Developments in UHF lower tropospheric wind profiling at NOAA's Aeronomy Laboratory, *Radio Science*, 30 (4), 977-1001, 1995.
- Chameides, W.L., K. Demerjian, D.L. Albritton, P. Amar, A. Barrera, F. Guzman, A. Dunker, H. Feldman, A. Hansen, J. Hales, G. Hidy, P. Roth, C. Olivotto, E. Owczarski, R. Patterson, R. Scheffe, K. Schere, and L. Schultz, Assessing policy-relevant science for managing ozone air quality, *Environmental Manager*, November, 11-15, 2000.
- Chan, K.R., L. Pfister, T.P. Bui, S.W. Bowen, J. Dean-Day, B.L. Gary, D.W. Fahey, K.K. Kelly, C.R. Webster, and R.D. May, A case study of the mountain lee wave event of January 6, 1992, *Geophysical Research Letters*, 20 (22), 2551-2554, 1993.
- Chang, A.Y., R.J. Salawitch, H.A. Michelsen, M.R. Gunson, M.C. Abrams, R. Zander, C.P. Rinsland, J.W. Elkins, G.S. Dutton, C.M. Volk, C.R. Webster, R.D. May, D.W. Fahey, R.S. Gao, M. Loewenstein, J.R. Podolske, R.M. Stimpfle, D.W. Kohn, M.H. Proffitt, J.J. Margitan, K.R. Chan, M.M. Abbas, A. Goldman, F.W. Irion, G.L. Manney, M.J. Newchurch, and G.P. Stiller, A comparison of measurements from ATMOS and instruments aboard the ER-2 aircraft: Halogenated gases, *Geophysical Research Letters*, 23 (17), 2393-2396, 1996.
- Chang, A.Y., R.J. Salawitch, H.A. Michelsen, M.R. Gunson, M.C. Abrams, R. Zander, C.P. Rinsland, M. Loewenstein, J.R. Podolske, M.H. Proffitt, J.J. Margitan, D.W. Fahey, R.S. Gao, K.K. Kelly, J.W. Elkins, C.R. Webster, R.D. May, K.R. Chan, M.M. Abbas, A. Goldman, F.W. Irion, G.L. Manney, M.J. Newchurch, and G.P. Stiller, A comparison of measurements from ATMOS and instruments aboard the ER-2 aircraft: Tracers of atmospheric transport, *Geophysical Research Letters*, 23 (17), 2389-2392, 1996.
- Chang, J.L., S.K. Avery, A.C. Riddle, S.E. Palo, and K.S. Gage, First results of tropospheric gravity wave momentum flux measurements over Christmas Island, *Radio Science*, 32 (2), 727-748, 1997.
- Chin, M., D.J. Jacob, J.W. Munger, D.D. Parrish, and B.G. Doddridge, Relationship of ozone and carbon monoxide over North America, *Journal of Geophysical Research*, 99 (D7), 14565-14573, 1994.

- Ciesielski, P.E., L.M. Hartten, and R.H. Johnson, Impacts of merging profiler and rawinsonde winds on TOGA COARE analyses, *Journal of Atmospheric and Oceanic Technology*, 14, 1264-1279, 1997.
- Ciesielski, P.E., R.H. Johnson, and P.T. Haertel, Corrected TOGA COARE sounding humidity data: Impact on diagnosed properties of convection and climate, *Journal of Climate*, submitted, 2003.
- Cifelli, R., C.R. Williams, D.K. Rajopadhyaya, S.K. Avery, K.S. Gage, and P.T. May, Drop-size distribution characteristics in tropical mesoscale convective systems, *Journal of Applied Meteorology*, 39 (6), 760-777, 2000.
- Cohn, S.A., R.R. Rogers, S. Jascourt, W.L. Ecklund, D.A. Carter, and J.S. Wilson, Interactions between clear-air reflective layers and rain observed with a boundary-layer wind profiler, *Radio Science*, 30 (2), 323-341, 1995.
- Cohn, S.A., J.R. Gyakum, R.R. Rogers, W.L. Ecklund, D.A. Carter, and J.S. Wilson, Wind profiler/RASS observations of two complex synoptic events, *Contributions to Atmospheric Physics*, 69 (1), 37-47, 1996.
- Cohn, S.A., and W.M. Angevine, Boundary layer height and entrainment zone thickness measured by lidars and wind-profiling radars, *Journal of Applied Meteorology*, 39, 1233-1247, 2000.
- Compo, G.P., G.N. Kiladis, and P.J. Webster, The horizontal and vertical structure of east Asian winter monsoon pressure surges, *Quarterly Journal of the Royal Meteorological Society*, 125, 29-54, 1999.
- Conway, R., M. Stevens, J. Cardon, S. Zasadil, C. Brown, J. Morrill, and G. Mount, Satellite measurements of hydroxyl in the mesosphere, *Geophysical Research Letters*, 23 (16), 2093-2096, 1996.
- Cooper, O.R., J.L. Moody, D.D. Parrish, M. Trainer, T.B. Ryerson, J.S. Holloway, G. Hübler, F.C. Fehsenfeld, S.J. Oltmans, and M.J. Evans, Trace gas signatures of the airstreams within North Atlantic cyclones: Case studies from the North Atlantic Regional Experiment (NARE '97) aircraft intensive, *Journal of Geophysical Research*, 106 (D6), 5437-5456, 2001.
- Cooper, O.R., J.L. Moody, D.D. Parrish, M. Trainer, T.B. Ryerson, J.S. Holloway, G. Hübler, F.C. Fehsenfeld, and M.J. Evans, Trace gas composition of midlatitude cyclones over the western North Atlantic Ocean: A conceptual model, *Journal of Geophysical Research*, 107 (D7), 4056, 10.1029/2001JD000901, 2002.
- Cooper, O.R., J.L. Moody, D.D. Parrish, M. Trainer, J.S. Holloway, G. Hübler, F.C. Fehsenfeld, and A. Stohl, Trace gas composition of midlatitude cyclones over the western North Atlantic Ocean: A seasonal comparison of O₃ and CO, *Journal of Geophysical Research*, 107 (D7), 4057, 10.1029/2001JD000902, 2002.
- Cooper, O., C. Forster, D.D. Parrish, M. Trainer, E. Dunlea, T.B. Ryerson, G. Hübler, F.C. Fehsenfeld, D.K. Nicks, Jr., J.S. Holloway, J.B. Nowak, C. Brock, J.A. de Gouw, C. Warneke, J.M. Roberts, F. Flocke, and J.L. Moody, A case study of trans-Pacific warm conveyor belt transport: The influence of merging airstreams on trace gas import to North America, *Journal of Geophysical Research*, in press, 2003.
- Cooper, O.R., C. Forster, D.D. Parrish, E. Dunlea, G. Hübler, F.C. Fehsenfeld, J.S. Holloway, S.J. Oltmans, B.J. Johnson, A. Wimmers, and L. Horowitz, On the life-cycle of a stratospheric intrusion and its large-scale mixing with polluted warm conveyor belts, *Journal of Geophysical Research*, submitted, 2003.
- Cowling, E.B., W.L. Chameides, C.S. Kiang, F.C. Fehsenfeld, and J.F. Meagher, Introduction to special section: Southern Oxidants Study Nashville/Middle Tennessee Ozone Study, *Journal of Geophysical Research*, 103 (D17), 22209-22212, 1998.
- Curtius, J., K.D. Froyd, and E.R. Lovejoy, Cluster ion thermal decomposition (I): Experimental kinetics study and ab initio calculations for HSO₄⁻(H₂SO₄)_x(HNO₃)_y, *The Journal of Physical Chemistry A*, 105 (48), 10867-10873, 2001.
- Cziczo, D.J., D.S. Thomson, and D.M. Murphy, Ablation, flux, and atmospheric implications of meteors inferred from stratospheric aerosol, *Science*, 291, 1772-1775, 2001.
- Cziczo, D.J., and J.P.D. Abbatt, Ice nucleation in NH₄HSO₄, NH₄NO₃, and H₂SO₄ aqueous particles: Implications for cirrus cloud formation, *Geophysical Research Letters*, 28 (6), 963-966, 2001.
- Cziczo, D.J., D.M. Murphy, D.S. Thomson, and M.N. Ross, Composition of individual particles in the wakes of an Athena II rocket and the space shuttle, *Geophysical Research Letters*, 29 (21), doi:10.1029/2002GL015991, 2002.
- Cziczo, D.J., P.J. DeMott, C. Brock, P.K. Hudson, B. Jesse, S.M. Kreidenweis, A.J. Prenni, J. Schreiner, D.S. Thomson, and D.M. Murphy, A method for single particle mass spectrometry of ice nuclei, *Aerosol Science and Technology*, 37, 460-470, DOI: 10.1080/02786820390112687, 2003.
- Cziczo, D.J., D.M. Murphy, P.K. Hudson, and D.S. Thomson, Single particle measurements of the chemical composition of cirrus ice residue during CRYSTAL-FACE, *Journal of Geophysical Research*, in press, 2003.
- Daniel, J.S., S. Solomon, and D.L. Albritton, On the evaluation of halocarbon radiative forcing and global warming potentials, *Journal of Geophysical Research*, 100 (D1), 1271-1285, 1995.
- Daniel, J.S., S.M. Schauffler, W.H. Pollack, S. Solomon, A. Weaver, L.E. Heidt, R.R. Garcia, E.L. Atlas, and J.F. Vedder, On the age of stratospheric air and inorganic chlorine and bromine release, *Journal of Geophysical Research*, 101 (D111), 16757-16770,

1996.

- Daniel, J.S., and S. Solomon, On the climate forcing of carbon monoxide, *Journal of Geophysical Research*, 103 (D11), 13249-13260, 1998.
- Daniel, J.S., S. Solomon, R.W. Sanders, R.W. Portmann, D.C. Miller, and W. Madsen, Implications for water monomer and dimer solar absorption from observations at Boulder, Colorado, *Journal of Geophysical Research*, 104 (D14), 16785-16791, 1999.
- Daniel, J.S., S. Solomon, R.W. Portmann, and R.R. Garcia, Stratospheric ozone destruction: The importance of bromine relative to chlorine, *Journal of Geophysical Research*, 104 (D19), 23871-23880, 1999.
- Daniel, J.S., S. Solomon, R.W. Portmann, A.O. Langford, C.S. Eubank, E.G. Dutton, and W. Madsen, Cloud liquid water and ice measurements from spectrally resolved near-infrared observations: A new technique, *Journal of Geophysical Research*, 107 (D21), 4599, doi:10.1029/2001JD000688, 2002.
- Daniel, J.S., S. Solomon, H.L. Miller, A.O. Langford, R.W. Portmann, and C.S. Eubank, Retrieving cloud information from passive measurements of solar radiation absorbed by molecular oxygen and O₂-O₂., *Journal of Geophysical Research*, 108 (D16), 4515, doi:10.1029/2002JD002994, 2003.
- Danilin, M.Y., D.W. Fahey, U. Schumann, M.J. Prather, J.E. Penner, M.K.W. Ko, D.K. Weisenstein, C.H. Jackman, G. Pitari, I. Köhler, R. Sausen, C.J. Weaver, A.R. Douglass, P.S. Connell, D.E. Kinnison, F.J. Dentener, E.L. Fleming, T.K. Bernstsen, I.S.A. Isaksen, J.M. Haywood, and B. Kärcher, Aviation fuel tracer simulation: Model intercomparison and implications, *Geophysical Research Letters*, 25 (21), 3947-3950, 1998.
- Darby, L.S., R.M. Banta, W.A. Brewer, W.D. Neff, R.D. Marchbanks, B.J. McCarty, C.J. Senff, A.B. White, W.A. Angevine, and E.J. Williams, Vertical variations in O₃ concentrations before and after a gust front passage, *Journal of Geophysical Research*, 107 (D13), 4176, doi:10.1029/2001JD000996, 2002.
- Davies, S., M.P. Chipperfield, K.S. Carslaw, B.-M. Sinnhuber, J.G. Anderson, R.M. Stimpfle, D.M. Wilmouth, D.W. Fahey, P.J. Popp, E.C. Richard, P. von der Gathen, H. Jost, and C.R. Webster, Modeling the effect of denitrification on Arctic ozone depletion during winter 1999/2000, *Journal of Geophysical Research*, 108 (D5), 8322, doi:10.1029/2001JD000445, 2003.
- Davis, D.D., J. Crawford, G. Chen, W. Chameides, S. Liu, J. Bradshaw, S. Sandholm, G. Sachse, G. Gregory, B. Anderson, J. Barrick, A. Bachmeier, J. Collins, E. Browell, D. Blake, S. Rowland, Y. Kondo, H. Singh, R. Talbot, G. Heikes, J. Merrill, J. Rodriguez, and R.E. Newell, Assessment of ozone photochemistry in the western North Pacific as inferred from PEM-West A observations during the fall of 1991, *Journal of Geophysical Research*, 101 (D1), 2111-2134, 1996.
- Davis, D., J. Crawford, S. Liu, S. McKeen, A. Brandy, D. Thornton, F. Rowland, and D. Blake, Potential impact of iodine on tropospheric levels of ozone and other critical oxidants, *Journal of Geophysical Research*, 101 (D1), 2135-2147, 1996.
- de F. Forster, P.M., and S. Solomon, Observations of a "weekend effect" in diurnal temperature range, *Proceedings of the National Academy of Sciences of the United States of America*, 100 (20), 11225-11230, doi:10.1073.pnas.2034034100, 2003.
- de Gouw, J.A., and C.J. Howard, Direct measurement of the rate coefficient for the CH₂ = C(CH₃)C(O)O₂ + NO reaction using chemical ionization mass spectrometry, *Journal of Physical Chemistry A*, 101 (46), 8662-8667, 1997.
- de Gouw, J.A., and E.R. Lovejoy, Reactive uptake of ozone by liquid organic compounds, *Geophysical Research Letters*, 25 (6), 931-934, 1998.
- de Gouw, J.A., C.J. Howard, T.G. Custer, and R. Fall, Emissions of volatile organic compounds from cut grass and clover are enhanced during the drying process, *Geophysical Research Letters*, 26 (7), 811-814, 1999.
- de Gouw, J.A., C.J. Howard, T.G. Custer, B.M. Baker, and R. Fall, Proton-transfer chemical-ionization mass spectrometry allows real-time analysis of volatile organic compounds released from cutting and drying of crops, *Environmental Science and Technology*, 34 (12), 2640-2648, 2000.
- de Gouw, J.A., O. Cooper, C. Warneke, P.K. Hudson, C. Brock, F.C. Fehsenfeld, J.S. Holloway, G. Hübler, D.K. Nicks, Jr., J.B. Nowak, D.D. Parrish, T.B. Ryerson, M. Trainer, E. Atlas, S.G. Donnelly, S. Schauffler, V. Stroud, K. Johnson, G. Carmichael, and D. Streets, Chemical composition of air masses transported from Asia to the U.S. west coast during ITCT 2k2: Fossil fuel combustion versus biomass burning signatures, *Journal of Geophysical Research*, submitted, doi:2003JD004202, 2003.
- de Gouw, J.A., C. Warneke, D.D. Parrish, J.S. Holloway, M. Trainer, and F.C. Fehsenfeld, Emission sources and ocean uptake of acetonitrile (CH₃CN) in the atmosphere, *Journal of Geophysical Research*, 108 (D11), 4329, doi:10.1029/2002JD002897, 2003.
- de Gouw, J.A., C. Warneke, T. Karl, G. Eerdekens, C. van der Veen, and R. Fall, Sensitivity and specificity of atmospheric trace gas detection by proton-transfer-reaction mass spectrometry, *International Journal of Mass Spectrometry and Ion Processes*, 223-224, 365-382, 2003.
- Del Negro, L.A., D.W. Fahey, S.G. Donnelly, R.-S. Gao, E.R. Keim, G. Wamsley, E.L. Woodbridge, J.E. Dye, D. Baumgardner,

B.W. Gandrud, J.C. Wilson, H.H. Jonsson, M. Loewenstein, J.R. Podolske, C.R. Webster, R.D. May, D.R. Worsnop, A. Tabazadeh, M.A. Tolbert, K.K. Kelly, and K.R. Chan, Evaluating the role of NAT, NAD, and liquid $H_2SO_4/H_2O/HNO_3$ solutions in Antarctic polar stratospheric cloud aerosol: Observations and implications, *Journal of Geophysical Research*, 102 (D11), 13255-13282, 1997.

Del Negro, L.A., D.W. Fahey, R.S. Gao, S.G. Donnelly, E.R. Keim, J.A. Neuman, R.C. Cohen, K.K. Perkins, L.C. Koch, R.J. Salawitch, S.A. Lloyd, M.H. Proffitt, J.J. Margitan, R.M. Stimpfle, G.P. Bonne, P.B. Voss, P.O. Wennberg, C.T. McElroy, W.H. Swartz, T.L. Kusterer, D.E. Anderson, L.R. Lait, and T.P. Bui, Comparison of modeled and observed values of NO_2 and J_{NO_2} during the Photochemistry of Ozone Loss in the Arctic Region in Summer (POLARIS) mission, *Journal of Geophysical Research*, 104 (D21), 26687-26703, 1999.

DeMott, P.J., D.J. Cziczo, A.J. Prenni, D.M. Murphy, S.M. Kreidenweis, D.S. Thomson, R. Borys, and D.C. Rogers, Measurements of the concentration and composition of nuclei for cirrus formation, *Proceedings of the National Academy of Sciences of the United States of America*, 100 (25), 14655-14660, doi:10.1073/pnas.2532677100, 2003.

Dhaniyala, S., R.C. Flagan, P.O. Wennberg, M.J. Northway, R.S. Gao, D.W. Fahey, and T.P. Bui, Particle sampling characteristics of the NOAA reactive nitrogen inlets, *Journal of Geophysical Research*, in press, 2002.

Donaldson, D.J., G.J. Frost, K.H. Rosenlof, A.F. Tuck, and V. Vaida, Atmospheric radical production by excitation of vibrational overtones via absorption of visible light, *Geophysical Research Letters*, 24 (21), 2651-2654, 1997.

Donaldson, D.J., A.R. Ravishankara, and D.R. Hanson, Detailed study of $HOCl + HCl \rightarrow Cl_2 + H_2O$ in sulfuric acid, *Journal of Physical Chemistry*, 101 (26), 4717-4725, 1997.

Donaldson, D.J., A.F. Tuck, and V. Vaida, Enhancement of HO_x at high solar zenith angles by overtone-induced dissociation of HNO_3 and HNO_4 , *Physical Chemical Earth (C)*, 25 (3), 223-227, 2000.

Donaldson, D.J., A.F. Tuck, and V. Vaida, Spontaneous fission of atmospheric aerosol particles, *Physical Chemistry Chemical Physics*, 3, 5270-5273, 2001.

Donaldson, D.J., A.F. Tuck, and V. Vaida, The asymmetry of organic aerosol fission and prebiotic chemistry, *Origins of Life and the Evolution of the Biosphere*, 32, 237-245, 2002.

Donaldson, D.J., A.F. Tuck, and V. Vaida, Atmospheric photochemistry via vibrational overtone absorption, *Chem. Revs.*, submitted, 2003.

Donaldson, D.J., H. Tervahattu, A.F. Tuck, and V. Vaida, Organic aerosols and the origin of life: An hypothesis, *Origins of Life and the Evolution of the Biosphere*, in press, 2003.

Drummond, F.J., R.R. Rogers, S.A. Cohn, W.L. Ecklund, D.A. Carter, and J.S. Wilson, A new look at the melting layer, *Journal of the Atmospheric Sciences*, 53 (5), 759-769, 1996.

Duderstadt, K.A., M.A. Carroll, S. Sillman, T. Wang, G.M. Albercook, L. Feng, D.D. Parrish, J.S. Holloway, F.C. Fehsenfeld, D.R. Blake, N.J. Blake, and G. Forbes, Photochemical production and loss rates of ozone at Sable Island, Nova Scotia during the North Atlantic Regional Experiment (NARE) 1993 summer intensive, *Journal of Geophysical Research*, 103 (D11), 13531-13555, 1998.

Dunlea, E., and A.R. Ravishankara, Kinetic studies of the reactions of O(1D) with several atmospheric molecules, *Physical Chemistry Chemical Physics*, submitted, 2004.

Dvortsov, V.L., M.A. Geller, S. Solomon, S.M. Schauffler, E.L. Atlas, and D.R. Blake, Rethinking reactive halogen budgets in the midlatitude lower stratosphere, *Geophysical Research Letters*, 26 (12), 1699-1702, 1999.

Dvortsov, V.L., and S. Solomon, Response of the stratospheric temperatures and ozone to past and future increases in stratospheric humidity, *Journal of Geophysical Research*, 106 (D7), 7505-7514, 2001.

Dye, J.E., D. Baumgardner, B.W. Gandrud, K. Drdla, K. Barr, D.W. Fahey, L.A. Del Negro, A. Tabazadeh, H.H. Jonsson, J.C. Wilson, M. Loewenstein, J.R. Podolske, and K.R. Chan, In situ observations of an Antarctic polar stratospheric cloud: Similarities with Arctic observations, *Geophysical Research Letters*, 23, 1913-1916, 1996.

Dye, J.E., B.A. Ridley, W. Skamarock, M. Barth, M. Venticinque, E. Defer, P. Blanchet, C. Thery, P. Laroche, K. Baumann, G. Hübler, D.D. Parrish, T. Ryerson, M. Trainer, G. Frost, J.S. Holloway, T. Matejka, D. Bartels, F.C. Fehsenfeld, A. Tuck, S.A. Rutledge, T. Lang, J. Stith, and R. Zerr, An overview of the Stratospheric-Tropospheric Experiment: Radiation, Aerosols, and Ozone (STERAO)-Deep convection experiment with results for the July 10, 1996 storm, *Journal of Geophysical Research*, 105 (D8), 10023-10045, 2000.

Eberhard, J., P.W. Villalta, and C.J. Howard, Reaction of isopropyl peroxy radicals with NO over the temperature range 201-401 K, *Journal of Physical Chemistry*, 100 (3), 993-997, 1996.

Eberhard, J., and C. Howard, Temperature-dependent kinetics studies of the reactions of $C_2H_5O_2$ and $n-C_3H_7O_2$ radicals with NO, *International Journal of Chemical Kinetics*, 28, 731-740, 1996.

- Eberhard, J., and C.J. Howard, Rate coefficients for the reactions of some C₃ to C₅ hydrocarbon peroxy radicals with NO, *Journal of Physical Chemistry A*, 101 (18), 3360-3366, 1997.
- Ecklund, W.L., K.S. Gage, and C.R. Williams, Tropical precipitation studies using a 915-MHz wind profiler, *Radio Science*, 30 (4), 1055-1064, 1995.
- Ecklund, W.L., C.R. Williams, P.E. Johnston, and K.S. Gage, A 3-GHz profiler for precipitating cloud studies, *Journal of Atmospheric and Oceanic Technology*, 16, 309-322, 1999.
- Eisele, F.L., G.H. Mount, F.C. Fehsenfeld, J. Harder, E. Marovich, D.D. Parrish, J. Roberts, M. Trainer, and D. Tanner, Intercomparison of tropospheric OH and ancillary trace gas measurements at Fritz Peak Observatory, Colorado, *Journal of Geophysical Research*, 99 (D9), 18605-18626, 1994.
- Eisele, F.L., G.H. Mount, D. Tanner, A. Jefferson, R.E. Shetter, J.W. Harder, and E.J. Williams, Understanding the production and interconversion of the hydroxyl radical during the Tropospheric OH Photochemistry Experiment, *Journal of Geophysical Research*, 102 (D5), 6457-6465, 1997.
- Eliason, T.L., S. Aloisio, D.J. Donaldson, D.J. Cziczo, and V. Vaida, Processing of unsaturated organic acid films and aerosols by ozone, *Atmospheric Environment*, 37, 2207-2219, doi:10.1016/S1352-2310(03)00149-3, 2003.
- Elkins, J.W., D.W. Fahey, J.M. Gilligan, G.S. Dutton, T.J. Baring, C.M. Volk, R.E. Dunn, R.C. Myers, S.A. Montzka, P.R. Wamsley, A.H. Hayden, J.H. Butler, R.M. Thompson, T.H. Swanson, E.J. Dlugokencky, P.C. Novelli, D.F. Hurst, J.M. Lobert, S.J. Ciciora, R.J. McLaughlin, T.L. Thompson, R.H. Winkler, P.J. Fraser, L.P. Steele, and M.P. Lucarelli, Airborne gas chromatograph for in situ measurements of long-lived species in the upper troposphere and lower stratosphere, *Geophysical Research Letters*, 23 (4), 347-350, 1996.
- Ellison, G.B., A.F. Tuck, and V. Vaida, Atmospheric processing of organic aerosols, *Journal of Geophysical Research*, 104 (D9), 11633-11641, 1999.
- Emmons, L.K., M.A. Carroll, D.A. Hauglustaine, G.P. Brasseur, C. Atherton, J. Penner, S. Sillman, H. Levy, II, F. Rohrer, W.M.F. Wauben, P.F.J. Van Velthoven, Y. Wang, D. Jacob, P. Bakwin, R. Dickerson, B. Doddridge, C. Gerbig, R. Honrath, G. Hübler, D. Jaffe, Y. Kondo, J.W. Munger, A. Torres, and A. Volz-Thomas, Climatologies of NO_x and NO_y: A comparison of data and models, *Atmospheric Environment*, 31 (12), 1851-1904, 1997.
- Fahey, D.W., S.R. Kawa, E.L. Woodbridge, P. Tin, J.C. Wilson, H.H. Jonsson, J.E. Dye, D. Baumgardner, S. Borrman, D.W. Toohey, L.M. Avallone, M.H. Proffitt, J. Margitan, M. Loewenstein, J.R. Podolske, R.J. Salawitch, S.C. Wofsy, M.K.W. Ko, D.E. Anderson, M.R. Schoeberl, and K.R. Chan, In situ measurements constraining the role of sulphate aerosols in mid-latitude ozone depletion, *Nature*, 363, 509-514, 1993.
- Fahey, D.W., E.R. Keim, K.A. Boering, C.A. Brock, J.C. Wilson, H.H. Jonsson, S. Anthony, T.F. Hanisco, P.O. Wennberg, R.C. Miake-Lye, R.J. Salawitch, N. Louisnard, E.L. Woodbridge, R.S. Gao, S.G. Donnelly, R.C. Wamsley, L.A. Del Negro, S. Solomon, B.C. Daube, S.C. Wofsy, C.R. Webster, R.D. May, K.K. Kelly, M. Loewenstein, J.R. Podolske, and K.R. Chan, Emission measurements of the Concorde supersonic aircraft in the lower stratosphere, *Science*, 270, 70-74, 1995.
- Fahey, D.W., E.R. Keim, E.L. Woodbridge, R.S. Gao, K.A. Boering, B.C. Daube, S.C. Wofsy, R.P. Lohmann, E.J. Hintsa, A.E. Dessler, C.R. Webster, R.D. May, C.A. Brock, J.C. Wilson, P.O. Wennberg, R.C. Cohen, R.C. Miake-Lye, R.C. Brown, J.M. Rodriguez, M. Loewenstein, M.H. Proffitt, R.M. Stimpfle, S.W. Bowen, and K.R. Chan, In situ observations in aircraft exhaust plumes in the lower stratosphere at midlatitudes, *Journal of Geophysical Research*, 100 (D2), 3065-3074, 1995.
- Fahey, D.W., S.G. Donnelly, E.R. Keim, R.S. Gao, R.C. Wamsley, L.A. Del Negro, E.L. Woodbridge, M.H. Proffitt, K.H. Rosenlof, M.K.W. Ko, D.K. Weisenstein, C.J. Scott, C. Nevison, S. Solomon, and K.R. Chan, In situ observations of NO_y, O₃, and the NO_y/O₃ ratio in the lower stratosphere, *Geophysical Research Letters*, 23 (13), 1653-1656, 1996.
- Fahey, D.W., and A.R. Ravishankara, Summer in the stratosphere, *Science*, 285, 208-210, 1999.
- Fahey, D.W., R.S. Gao, L.A. Del Negro, E.R. Keim, S.R. Kawa, R.J. Salawitch, P.O. Wennberg, T.F. Hanisco, E.J. Lanzendorf, K.K. Perkins, S.A. Lloyd, W.H. Swartz, M.H. Proffitt, J.J. Margitan, J.C. Wilson, R.M. Stimpfle, R.C. Cohen, C.T. McElroy, C.R. Webster, M. Loewenstein, J.W. Elkins, and T.P. Bui, Ozone destruction and production rates between spring and autumn in the Arctic stratosphere, *Geophysical Research Letters*, 27 (17), 2605-2608, 2000.
- Fahey, D.W., R.S. Gao, K.S. Carslaw, J. Kettleborough, P.J. Popp, M.J. Northway, J.C. Holecek, S.J. Ciciora, R.J. McLaughlin, T.L. Thompson, R.H. Winkler, D.G. Baumgardner, B. Gandrud, P.O. Wennberg, S. Dhaniyala, K. McKinney, T. Peter, R.J. Salawitch, T.P. Bui, J.W. Elkins, C.R. Webster, E.L. Atlas, H. Jost, J.C. Wilson, R.L. Herman, A. Kleinböhl, and M. von König, The detection of large HNO₃-containing particles in the winter Arctic stratosphere, *Science*, 291 (5506), 1026-1031, 2001.
- Fairlie, T.D., R.B. Pierce, J.A. Al-Saadi, W.L. Grose, J.M. Russell III, M.H. Proffitt, and C.R. Webster, The contribution of mixing in Lagrangian photochemical predictions of polar ozone loss over the Arctic in summer 1997., *Journal of Geophysical Research*, 104 (D21 POLARIS), 26597-26609, 1999.

- Fehsenfeld, F.C., M. Trainer, D.D. Parrish, A. Volz-Thomas, and S. Penkett, North Atlantic Regional Experiment 1993 summer intensive: Foreword, *Journal of Geophysical Research*, 101 (D22), 28869-28875, 1996.
- Fehsenfeld, F.C., P. Daum, W.R. Leaitch, M. Trainer, D.D. Parrish, and G. Hübler, Transport and processing of O₃ and O₃ precursors over the North Atlantic: An overview of the 1993 North Atlantic Regional Experiment (NARE) summer intensive, *Journal of Geophysical Research*, 101 (D22), 28877-28891, 1996.
- Fehsenfeld, F.C., L.G. Huey, D.T. Sueper, R.B. Norton, E.J. Williams, F.L. Eisele, R.L. Mauldin III, and D.L. Tanner, Ground-based intercomparison of nitric acid measurement techniques, *Journal of Geophysical Research*, 103 (D3), 3343-3353, 1998.
- Fehsenfeld, F.C., L.G. Huey, E. Leibrock, R. Dissly, E. Williams, T.B. Ryerson, R. Norton, D.T. Sueper, and B. Hartsell, Results from an informal intercomparison of ammonia measurement techniques, *Journal of Geophysical Research*, 107 (D24), 4812, doi:10.1029/2001JD001327, 2002.
- Feingold, G., G.J. Frost, and A.R. Ravishankara, The role of NO₃ in sulfate production in the wintertime northern latitudes, *Journal of Geophysical Research*, *in press*, 2001.
- Feingold, G., G.J. Frost, and A.R. Ravishankara, Role of NO₃ in sulfate production in the wintertime northern latitudes, *Journal of Geophysical Research*, 107 (D22), 4640, doi:10.1029/2002JD002288, 2002.
- Ferguson, E., F.C. Fehsenfeld, P.D. Goldan, and A. Schmeltekopf, Positive ion-neutral reactions in the ionosphere, *Journal of Mass Spectrometry*, 32, 1273-1278, 1997.
- Ferlemann, R., N. Bauer, R. Fitzenberger, H. Harder, H. Osterkamp, D. Perner, U. Platt, M. Schneider, P. Vradelis, and K. Pfeilsticker, Differential optical absorption spectroscopy instrument for stratospheric balloonborne trace-gas studies, *Applied Optics*, 39 (15), 2377-2386, 2000.
- Flatau, M.K., P.J. Flatau, J. Schmidt, and G.N. Kiladis, Delayed onset of the 2002 Indian monsoon, *Geophysical Research Letters*, 30 (14), 1768, doi:10.1029/2003GL017434, 2003.
- Flocke, F., R.L. Herman, R.J. Salawitch, E. Atlas, C.R. Webster, S.M. Schauffler, R.A. Lueb, R.D. May, E.J. Moyer, K.H. Rosenlof, D.C. Scott, D.R. Blake, and T.P. Bui, An examination of chemistry and transport processes in the tropical lower stratosphere using observations of long-lived and short-lived compounds obtained during STRAT and POLARIS, *Journal of Geophysical Research*, 104 (D21 POLARIS), 26625-26642, 1999.
- Folkins, I., R. Chatfield, D. Baumgardner, and M. Proffitt, Biomass burning and deep convection in southeastern Asia: Results from ASHOE/MAESA, *Journal of Geophysical Research*, 102 (D11), 13291-13299, 1997.
- Folkins, I., M. Loewenstein, J.R. Podolske, S.J. Oltmans, and M. Proffitt, A barrier to vertical mixing at 14 km in the tropics: Evidence from ozonesondes and aircraft measurements, *Journal of Geophysical Research*, 104 (D18), 22095-22102, 1999.
- Forster, C., O. Cooper, A. Stohl, S. Eckhardt, P. James, E. Dunlea, D.K. Nicks, Jr., J.S. Holloway, G. Hübler, D.D. Parrish, T.B. Ryerson, and M. Trainer, Lagrangian transport model forecasts and a transport climatology for the flight planning during the Intercontinental Transport and Chemical Transformation 2002 (ITCT 2k2) measurement campaign, *Journal of Geophysical Research*, *in press*, 2003.
- Fried, A., S. McKeen, S. Sewell, J. Harder, B. Henry, P. Goldan, W. Kuster, E. Williams, K. Baumann, R. Shetter, and C. Cantrell, Photochemistry of formaldehyde during the 1993 Tropospheric OH Photochemistry Experiment, *Journal of Geophysical Research*, 102 (D5), 6283-6296, 1997.
- Fried, A., Y.-N. Lee, G.J. Frost, B. Wert, B. Henry, J.R. Drummond, G. Hübler, and T. Jobson, Airborne CH₂O measurements over the North Atlantic during the 1997 NARE campaign: Instrument comparisons and distributions, *Journal of Geophysical Research*, 107 (D4), 10.1029/2000JD000260, ACH 1-1:1-21, 2002.
- Fritts, D.C., and T.E. Van Zandt, Spectral estimates of gravity wave energy and momentum fluxes: Part I, Energy dissipation, acceleration, and constraints, *Journal of the Atmospheric Sciences*, 50 (22), 3685-3694, 1993.
- Frost, G.J., M. Trainer, G. Allwine, M.P. Buhr, J.G. Calvert, C.A. Cantrell, F.C. Fehsenfeld, P.D. Goldan, J. Herwehe, G. Hübler, W.C. Kuster, R. Martin, R.T. McMillen, S.A. Montzka, R.B. Norton, D.D. Parrish, B.A. Ridley, R.E. Shetter, J.G. Walega, B.A. Watkins, H.H. Westberg, and E.J. Williams, Photochemical ozone production in the rural southeastern United States during the 1990 Rural Oxidants in the Southern Environment (ROSE) program, *Journal of Geophysical Research*, 103 (D17), 22491-22508, 1998.
- Frost, G.J., G.B. Ellison, and V. Vaida, Organic peroxy radical photolysis in the near-infrared: Effects on tropospheric chemistry, *Journal of Physical Chemistry A*, 103 (49), 10169-10178, 1999.
- Frost, G.J., M. Trainer, R.L. Mauldin III, F.L. Eisele, A.S.H. Prevot, S.J. Flocke, S. Madronich, G. Kok, R.D. Schillawski, D. Baumgardner, and J. Bradshaw, Photochemical modeling of OH levels during the First Aerosol Characterization Experiment (ACE1), *Journal of Geophysical Research*, 104 (D13), 16041-16052, 1999.
- Frost, G.J., A. Fried, Y.-N. Lee, B. Wert, B. Henry, J.R. Drummond, M.J. Evans, F.C. Fehsenfeld, P.D. Goldan, J.S. Holloway, G.

- Hübner, R. Jakoubek, B.T. Jobson, K. Knapp, W.C. Kuster, J. Roberts, J. Rudolph, T.B. Ryerson, A. Stohl, C. Stroud, D.T. Sueper, M. Trainer, and J. Williams, Comparisons of box model calculations and measurements of formaldehyde from the 1997 North Atlantic Regional Experiment, *Journal of Geophysical Research*, 107 (D13), 10.1029/2001JD000896, 2002.
- Froyd, K.D., and E.R. Lovejoy, Direct measurement of the $C_2H_5C(O)O_2 + NO$ reaction rate coefficient using chemical ionization mass spectrometry, *International Journal of Chemical Kinetics*, 31, 221-228, 1999.
- Froyd, K.D., and E.R. Lovejoy, Experimental thermodynamics of cluster ions composed of H_2SO_4 and H_2O : I, Positive ions, *Journal of Physical Chemistry*, submitted, 2003.
- Froyd, K.D., and E.R. Lovejoy, Experimental thermodynamics of cluster ions composed of H_2SO_4 and H_2O : II, Measurements and AB initio structures of negative ions, *Journal of Physical Chemistry*, submitted, 2003.
- Fueglistaler, S., B.P. Luo, S. Buss, H. Wernli, C. Voigt, M. Müller, R. Neuber, C.A. Hostettler, L.R. Poole, H. Flentje, D.W. Fahey, M.J. Northway, and T. Peter, Large NAT particle formation by mother clouds: Analysis of SOLVE/THESEO-2000 observations, *Geophysical Research Letters*, 29 (12), 10.1029/2001GL014548, 2002.
- Gage, K.S., J.R. McAfee, D.A. Carter, W.L. Ecklund, G.C. Reid, A.C. Riddle, P.E. Johnston, and B.B. Balsley, Wind profiler yields observations of ENSO signal, *EOS, Transactions, American Geophysical Union*, 74 (12), 137 and 142, 1993.
- Gage, K.S., J.R. McAfee, W.L. Ecklund, D.A. Carter, C.R. Williams, P.E. Johnston, and A.C. Riddle, The Christmas Island wind profiler: A prototype VHF wind-profiling Doppler radar for the tropics, *Journal of Atmospheric and Oceanic Technology*, 11 (1), 22-31, 1994.
- Gage, K.S., C.R. Williams, and W.L. Ecklund, UHF wind profilers: A new tool for diagnosing tropical convective cloud systems, *Bulletin of the American Meteorological Society*, 75 (12), 2289-2294, 1994.
- Gage, K.S., C.R. Williams, and W.L. Ecklund, Application of the 915 MHz profiler for diagnosing and classifying tropical precipitating cloud systems, *Meteorology and Atmospheric Physics*, 59, 141-151, 1996.
- Gage, K.S., J.R. McAfee, and C.R. Williams, On the annual variation of tropospheric zonal winds observed above Christmas Island in the central equatorial Pacific, *Journal of Geophysical Research*, 101, 15061-15070, 1996.
- Gage, K.S., J.R. McAfee, and C.R. Williams, Recent changes in tropospheric circulation over the central equatorial Pacific, *Geophysical Research Letters*, 23 (16), 2149-2152, 1996.
- Gage, K.S., C.R. Williams, W.L. Ecklund, and P.E. Johnston, Development and application of Doppler radar profilers to ground validation of satellite precipitation measurements, *Advances in Space Research*, 24 (7), 931-934, 1999.
- Gage, K.S., C.R. Williams, W.L. Ecklund, and P.E. Johnston, Use of two profilers during MCTEX for unambiguous identification of Bragg scattering and Rayleigh scattering, *Journal of the Atmospheric Sciences*, 56, 3679-3691, 1999.
- Gage, K.S., C.R. Williams, P.E. Johnston, W.L. Ecklund, R. Cifelli, A. Tokay, and D.A. Carter, Doppler radar profilers as calibration tool for scanning radars, *Journal of Applied Meteorology*, 39, 2209-2222, 2000.
- Gage, K.S., C.R. Williams, W.L. Clark, P.E. Johnston, and D.A. Carter, Profiler contributions to Tropical Rainfall Measuring Mission (TRMM) Ground Validation Field Campaigns, *Journal of Atmospheric and Oceanic Technology*, 19, 843-863, 2002.
- Gage, K.S., and E.E. Gossard, Recent developments in observation, modeling and understanding of atmospheric turbulence and waves, *Meteorological Monographs, in press*, 2002.
- Gao, R.S., E.R. Keim, E.L. Woodbridge, S.J. Ciciora, M.H. Proffitt, T.L. Thompson, R.J. McLaughlin, and D.W. Fahey, New photolysis system for NO_2 measurements in the lower stratosphere, *Journal of Geophysical Research*, 99 (D10), 20673-20681, 1994.
- Gao, R.S., D.W. Fahey, R.J. Salawitch, S.A. Lloyd, D.E. Anderson, R. DeMajistre, C.T. McElroy, E.L. Woodbridge, R.C. Wamsley, S.G. Donnelly, L.A. Del Negro, M.H. Proffitt, R.M. Stimpfle, D.W. Kohn, S.R. Kawa, L.R. Lait, M. Loewenstein, J.R. Podolske, E.R. Keim, J.E. Dye, J.C. Wilson, and K.R. Chan, Partitioning of the reactive nitrogen reservoir in the lower stratosphere of the Southern Hemisphere: Observations and modeling, *Journal of Geophysical Research*, 102 (D3), 3935-3949, 1997.
- Gao, R.S., B. Kärcher, E.R. Keim, and D.W. Fahey, Constraining the heterogeneous loss O_3 on soot particles with observations in jet engine exhaust plumes, *Geophysical Research Letters*, 25 (17), 3323-3326, 1998.
- Gao, R.S., D.W. Fahey, L.A. Del Negro, S.G. Donnelly, E.R. Keim, J.A. Neuman, E. Teverovskaia, P.O. Wennberg, T.F. Hanisco, E.J. Lanzendorf, M.H. Proffitt, J.J. Margitan, J.C. Wilson, J.W. Elkins, R.M. Stimpfle, R.C. Cohen, C.R. McElroy, T.P. Bui, R.J. Salawitch, S.S. Brown, A.R. Ravishankara, R.W. Portmann, M.K.W. Ko, D.K. Weisenstein, and P.A. Newman, A comparison of observations and model simulations of NO_x/NO_y in the lower stratosphere, *Geophysical Research Letters*, 26 (8), 1153-1156, 1999.
- Gao, R.S., R.J. McLaughlin, M.E. Schein, J.A. Neuman, S.J. Ciciora, J.C. Holecek, and D.W. Fahey, Computer-controlled Teflon flow control valve, *Reviews of Scientific Instruments*, 70 (12), 4732-4733, 1999.

- Gao, R.S., L.A. Del Negro, W.H. Swartz, R.J. Salawitch, S.A. Lloyd, M.H. Proffitt, D.W. Fahey, S.G. Donnelly, J.A. Neuman, R.M. Stimpfle, and T.P. Bui, J_{NO_2} at high solar zenith angles in the lower stratosphere, *Journal of Geophysical Research*, 28, 2405-2408, 2001.
- Gao, R.S., E.C. Richard, P.J. Popp, G.C. Toon, D.F. Hurst, P.A. Newman, J.C. Holecek, M.J. Northway, D.W. Fahey, M.Y. Danilin, B. Sen, K. Aikin, P.A. Romashkin, J.W. Elkins, C.R. Webster, S. Schauffler, J.B. Greenblatt, C.T. McElroy, L.R. Lait, T.P. Bui, and D. Baumgardner, Observational evidence for the role of denitrification in Arctic stratospheric ozone loss, *Geophysical Research Letters*, 28 (15), 2879-2882, 2001.
- Gao, R.S., P.J. Popp, E.A. Ray, K.H. Rosenlof, M.J. Northway, D.W. Fahey, A.F. Tuck, C.R. Webster, D.F. Hurst, S.M. Schauffler, H. Jost, and T.P. Bui, Role of NO_y as a diagnostic of small-scale mixing in a denitrified polar vortex, *Journal of Geophysical Research*, 107 (D24), 4794, doi:10.1029/2002JD002332, 2002.
- Gao, R.S., P.J. Popp, D.W. Fahey, T.P. Marcy, R.L. Herman, E.M. Weinstock, D.G. Baumgardner, T.J. Garrett, K.H. Rosenlof, T.L. Thompson, T.P. Bui, B.A. Ridley, S.C. Wofsy, O.B. Toon, M.A. Tolbert, B. Kärcher, T. Peter, P.K. Hudson, A.J. Weinheimer, and A.J. Heymsfield, Evidence that nitric acid increases relative humidity in low-temperature cirrus clouds, *Science*, in press, 2003.
- Garcia, R.R., and S. Solomon, A new numerical model of the middle atmosphere: 2, Ozone and related species, *Journal of Geophysical Research*, 99 (D6), 12937-12951, 1994.
- Gettleman, A., J.R. Holton, and K.H. Rosenlof, Mass fluxes of O_3 , CH_4 , N_2O , and CF_2Cl_2 in the lower stratosphere calculated from observational data, *Journal of Geophysical Research*, 102 (D15), 19149-19159, 1997.
- Geyer, A., B. Alicke, R. Ackermann, M. Martinez, H. Harder, W. Brune, P. di Carlo, E. Williams, B.T. Jobson, S. Hall, R.E. Shetter, and J. Stutz, Direct observations of daytime NO_3 : Implications for urban boundary layer chemistry, *Journal of Geophysical Research*, 108 (D12), 4368, doi:10.1029/2002JD002967, 2003.
- Gierczak, T., L. Goldfarb, D. Sueper, and A.R. Ravishankara, Kinetics of the reactions of Cl atoms with CH_3Br and CH_2Br_2 , *International Journal of Chemical Kinetics*, 26, 719-728, 1994.
- Gierczak, T., R.K. Talukdar, J.B. Burkholder, R.W. Portmann, J.S. Daniel, S. Solomon, and A.R. Ravishankara, Atmospheric fate and greenhouse warming potentials of HFC 236fa and HFC 236ea, *Journal of Geophysical Research*, 101 (D8), 12905-12911, 1996.
- Gierczak, T., J.B. Burkholder, R.K. Talukdar, A. Mellouki, S.B. Barone, and A.R. Ravishankara, Atmospheric fate of methyl vinyl ketone and methacrolein, *Journal of Photochemistry and Photobiology*, 110, 1-10, 1997.
- Gierczak, T., R.K. Talukdar, S.C. Herndon, G.L. Vaghjiani, and A.R. Ravishankara, Rate coefficients for the reactions of hydroxyl radicals with methane and deuterated methanes, *Journal of Physical Chemistry A*, 101 (17), 3125-3134, 1997.
- Gierczak, T., J.B. Burkholder, S. Bauerle, and A.R. Ravishankara, Photochemistry of acetone under tropospheric conditions, *Chemical Physics*, 231, 229-244, 1998.
- Gierczak, T., J.B. Burkholder, and A.R. Ravishankara, Temperature dependent rate coefficient for the reaction $\text{O}({}^3\text{P}) + \text{NO}_2 \rightarrow \text{NO} + \text{O}_2$, *Journal of Physical Chemistry A*, 103 (7), 877-883, 1999.
- Gierczak, T., and A.R. Ravishankara, Does the HO_2 radical react with ketones?, *International Journal of Chemical Kinetics*, 32, 573-580, 2000.
- Gierczak, T., M.K. Gilles, S. Bauerle, and A.R. Ravishankara, Reaction of hydroxyl radical with acetone. 1. Kinetics of the reactions of OH, OD, and ^{18}OH with acetone and acetone- d_6 , *The Journal of Physical Chemistry A*, 107 (25), doi:10.1021/jp027301a, pp. 5014-5020, 2003.
- Gilles, M.K., A.A. Turnipseed, R.K. Talukdar, Y. Rudich, P.W. Villalta, L.G. Huey, J.B. Burkholder, and A.R. Ravishankara, Reactions of $\text{O}({}^3\text{P})$ with alkyl iodides: Rate coefficients and reaction products, *Journal of Physical Chemistry*, 100 (33), 14005-14015, 1996.
- Gilles, M.K., A.A. Turnipseed, J.B. Burkholder, A.R. Ravishankara, and S. Solomon, Kinetics of the IO radical: 2, Reaction of IO with BrO , *Journal of Physical Chemistry A*, 101 (30), 5526-5534, 1997.
- Gilles, M.K., A.A. Turnipseed, J.B. Burkholder, and A.R. Ravishankara, A study of the $\text{Br} + \text{IO} \leftrightarrow \text{I} + \text{BrO}$ reaction, *Chemical Physics Letters*, 272, 75-82, 1997.
- Gilles, M.K., J.B. Burkholder, and A.R. Ravishankara, Rate coefficients for the reaction of OH with Cl_2 , Br_2 , and I_2 from 235 to 354 K, *International Journal of Chemical Kinetics*, 31 (6), 417-424, 1999.
- Gilles, M.K., R.K. Talukdar, and A.R. Ravishankara, Rate coefficients for the $\text{OH} + \text{CF}_3\text{I}$ reaction between 271 and 370 K, *The Journal of Physical Chemistry A*, 104 (39), 8945-8950, 2000.
- Gilles, M.K., and A.R. Ravishankara, Upper limit for the rate coefficient for the reaction of OH with N_2O_5 , *Physical Chemistry Chemical Physics*, 2, 4045-4048, 2000.

- Gilles, M.K., D.C. McCabe, J.B. Burkholder, and A.R. Ravishankara, Measurement of rate coefficient for the reaction of OH with BrO, *The Journal of Physical Chemistry A*, 105 (24), 5849-5853, 2001.
- Gilles, M.K., J.B. Burkholder, T. Gierczak, P. Marshall, and A.R. Ravishankara, Rate coefficient and product branching measurements for the reaction OH + bromopropane, *The Journal of Physical Chemistry A*, submitted, 2001.
- Gilles, M.K., J.B. Burkholder, T. Gierczak, P. Marshall, and A.R. Ravishankara, Rate coefficient and product branching measurements for the reaction OH + Bromopropane from 230 to 360 K, *The Journal of Physical Chemistry A*, 106 (21), doi:10.1021/jp014736+, pp. 5358-5366, 2002.
- Gilpin, T., E. Apel, A. Fried, B. Wert, J. Calvert, Z. Genfa, P. Dasgupta, J.H. Harder, B. Heikes, B. Hopkins, H. Westberg, T. Kleindienst, Y.-N. Lee, S. Zhou, W. Lonneman, and S. Sewell, Intercomparison of six ambient [CH₂O] techniques, *Journal of Geophysical Research*, 102 (D17), 21161-21188, 1997.
- Goldan, P.D., W.C. Kuster, F.C. Fehsenfeld, and S.A. Montzka, The observation of a C₅ alcohol emission in a North American pine forest, *Geophysical Research Letters*, 20 (11), 1039-1042, 1993.
- Goldan, P.D., W.C. Kuster, and F.C. Fehsenfeld, Hydrocarbon measurements in the southeastern United States: The Rural Oxidants in the Southern Environment (ROSE) Program 1990, *Journal of Geophysical Research*, 100 (D12), 25945-25963, 1995.
- Goldan, P.D., M. Trainer, W.C. Kuster, D.D. Parrish, J. Carpenter, J.M. Roberts, J.E. Yee, and F.C. Fehsenfeld, Measurements of hydrocarbons, oxygenated hydrocarbons, carbon monoxide, and nitrogen oxides in an urban basin in Colorado: Implications for emission inventories, *Journal of Geophysical Research*, 100 (D11), 22771-22783, 1995.
- Goldan, P.D., W.C. Kuster, and F.C. Fehsenfeld, Nonmethane hydrocarbon measurements during the Tropospheric OH Photochemistry Experiment, *Journal of Geophysical Research*, 102 (D5), 6315-6324, 1997.
- Goldan, P.D., W.C. Kuster, F.C. Fehsenfeld, and V. Young, Nonmethane hydrocarbon sampling during the 1995 Southern Oxidant Study: Comparison of in situ and canister sampling results, *Journal of Geophysical Research*, submitted, 1998.
- Goldan, P.D., D.D. Parrish, W.C. Kuster, M. Trainer, S.A. McKeen, J. Holloway, B.T. Jobson, D.T. Sueper, and F.C. Fehsenfeld, Airborne measurements of isoprene, CO, and anthropogenic hydrocarbons and their implications, *Journal of Geophysical Research*, 105 (D7), 9091-9105, 2000.
- Golden, D.M., G.P. Smith, A.B. McEwen, C.-L. Yu, B. Eiteneer, M. Frenklach, G.L. Vaghjiani, A.R. Ravishankara, and F.P. Tully, OH(OD) + CO: Measurements and an optimized RRKM fit, *Journal of Physical Chemistry A*, 102 (44), 8598-8606, 1998.
- Goldfarb, L., A.-M. Schmoltner, M.K. Gilles, J.B. Burkholder, and A.R. Ravishankara, Photodissociation of ClONO₂: 1, Atomic resonance fluorescence measurements of product quantum yields, *Journal of Physical Chemistry A*, 101 (36), 6658-6666, 1997.
- Goldfarb, L., M.H. Harwood, J.B. Burkholder, and A.R. Ravishankara, Reaction of O(³P) with ClONO₂: Rate coefficients and yield of NO₃ product, *Journal of Physical Chemistry A*, 102 (44), 8556-8563, 1998.
- Goldfarb, L., J.B. Burkholder, and A.R. Ravishankara, Kinetics of the O + ClO reaction, *The Journal of Physical Chemistry A*, 105 (22), 5402-5409, 2001.
- Goldman, A., J.R. Gillis, C.P. Rinsland, and J.B. Burkholder, Improved line parameters for the X²Π-X²Π (1-0) bands of ³⁵ClO and ³⁷ClO, *Journal of Quantitative Spectroscopy & Radiative Transfer*, 52 (3/4), 357-359, 1994.
- Gordley, L., J. Russell III, L. Mickley, J. Frederick, J. Park, K. Stone, G. Beaver, J. McInerney, L. Deaver, G. Toon, F. Murcray, R. Vlatherwick, M. Gunson, J. Abbatt, R. Mauldin III, G. Mount, B. Sen, and J.-F. Blavier, Validation of nitric oxide and nitrogen dioxide measurements made by the Halogen Occultation Experiment for UARS platform, *Journal of Geophysical Research*, 101 (D6), 10241-10266, 1996.
- Granier, C., J.F. Müller, G. Pétron, and G. Brasseur, A three-dimensional study of the global CO budget, *Chemosphere*, 1 (Global Change Science), 255-261, 1999.
- Granier, C., G. Pétron, J.-F. Muller, and G.P. Brasseur, The impact of natural and anthropogenic hydrocarbons on the tropospheric budget of carbon monoxide, *Atmospheric Environment*, 34, 5255-5270, 2000.
- Granier, C., and G.P. Brasseur, The impact of road traffic on global tropospheric ozone, *Geophysical Research Letters*, submitted, 2002.
- Grimsdell, A.W., and W.M. Angevine, Convective boundary layer height measurement with wind profilers and comparison to cloud base, *Journal of Atmospheric and Oceanic Technology*, 15, 1331-1338, 1998.
- Grimsdell, A.W., and W.M. Angevine, Observations of the afternoon transition of the convective boundary layer, *Journal of Atmospheric Meteorology*, submitted, 2000.
- Grivet-Talocia, S., F. Einaudi, W.L. Clark, R.D. Dennett, G.D. Nastrom, and T.E. Van Zandt, Four-year climatology of pressure disturbances using a barometer network in central Illinois, *Monthly Weather Review*, 127, 1613-1629, 1999.

- Grose, W.L., G.S. Lingenfelter, J.M. Russell III, R.B. Pierce, T.D. Fairlie, and M.H. Proffitt, Intercomparison of ozone measurements in the lower stratosphere from the UARS Halogen Occultation Experiment and the ER-2 UV absorption photometer, *Journal of Geophysical Research*, 102 (D11), 13135-13140, 1997.
- Gupta, S., R.T. McNider, M. Trainer, R.J. Zamora, K. Knapp, and M.P. Singh, Nocturnal wind structure and plume growth rates due to inertial oscillations, *Journal of Applied Meteorology*, 36, 1050-1063, 1997.
- Gutzler, D.S., and R.D. Rosen, Interannual variability of wintertime snow cover across the Northern Hemisphere, *Journal of Climate*, 6 (12), 1441-1447, 1993.
- Gutzler, D.S., and R.A. Madden, Seasonal variations of the 40-50-day oscillation in atmospheric angular momentum, *Journal of the Atmospheric Sciences*, 50 (6), 850-860, 1993.
- Gutzler, D.S., Uncertainties in climatological tropical humidity profiles: Some implications for estimating the greenhouse effect, *Journal of Climate*, 6 (5), 978-982, 1993.
- Gutzler, D.S., G.N. Kiladis, G.A. Meehl, K.M. Weickmann, and M. Wheeler, The global climate of December 1992-February 1993: Part II, Large-scale variability across the tropical western Pacific during TOGA COARE, *Journal of Climate*, 7 (10), 1606-1622, 1994.
- Gutzler, D.S., and L.M. Hartten, Daily variability of lower tropospheric winds over the tropical western Pacific, *Journal of Geophysical Research*, 100 (D11), 22999-23008, 1995.
- Haertel, P., D. Randall, and T. Jensen, Simulating upwelling in a large lake using slippery sacks, *Monthly Weather Review*, submitted, 2003.
- Haertel, P.T., and G.N. Kiladis, On the dynamics of two-day equatorial disturbances, *Journal of the Atmospheric Sciences*, submitted, 2004.
- Hanisco, T.F., P.O. Wennberg, R.C. Cohen, J.G. Anderson, D.W. Fahey, E.R. Keim, R.S. Gao, R.C. Wamsley, S.G. Donnelly, L.A. Del Negro, R.J. Salawitch, K.K. Kelly, and M.H. Proffitt, The role of HO_x in super- and subsonic aircraft exhaust plumes, *Geophysical Research Letters*, 24, 65-68, 1997.
- Hanson, D.R., and A.R. Ravishankara, Reaction of ClONO₂ with HCl on NAT, NAD, and frozen sulfuric acid and hydrolysis of N₂O₅ and ClONO₂ on frozen sulfuric acid, *Journal of Geophysical Research*, 98 (D12), 22931-22936, 1993.
- Hanson, D.R., and A.R. Ravishankara, Response to "Comment of porosities of ice films used to simulate stratospheric cloud surfaces", *Journal of Physical Chemistry*, 97 (10), 2802-2803, 1993.
- Hanson, D.R., and A.R. Ravishankara, Uptake of HCl and HOCl onto sulfuric acid: Solubilities, diffusivities, and reaction, *Journal of Physical Chemistry*, 97, 12309-12319, 1993.
- Hanson, D.R., A.R. Ravishankara, and S. Solomon, Heterogeneous reactions in sulfuric acid aerosols: A framework for model calculations, *Journal of Geophysical Research*, 99 (D2), 3615-3629, 1994.
- Hanson, D.R., and A.R. Ravishankara, Reactive uptake of ClONO₂ onto sulfuric acid due to reaction with HCl and H₂O, *Journal of Physical Chemistry*, 98, 5728-5735, 1994.
- Hanson, D.R., and E.R. Lovejoy, The uptake of N₂O₅ onto small sulfuric acid particles, *Geophysical Research Letters*, 21 (22), 2401-2404, 1994.
- Hanson, D.R., and A.R. Ravishankara, Heterogeneous chemistry of bromine species in sulfuric acid under stratospheric conditions, *Geophysical Research Letters*, 22 (4), 385-388, 1995.
- Hanson, D.R., and E.R. Lovejoy, The reaction of ClONO₂ with submicrometer sulfuric acid aerosol, *Science*, 267, 1326-1328, 1995.
- Hanson, D.R., Reactivity of ClONO₂ on H₂¹⁸O ice and organic liquids, *Journal of Physical Chemistry*, 99, 13059-13061, 1995.
- Hanson, D.R., and E.R. Lovejoy, Heterogeneous reactions in liquid sulfuric acid: HOCl + HCl as a model system, *Journal of Physical Chemistry*, 100 (16), 6397-6405, 1996.
- Hanson, D.R., A.R. Ravishankara, and E.R. Lovejoy, Reaction of BrONO₂ with H₂O on submicron sulfuric acid aerosol and the implications for the lower stratosphere, *Journal of Geophysical Research*, 101 (D4), 9063-9069, 1996.
- Hanson, D.R., Reaction of N₂O₅ with H₂O on bulk liquids and on particles and the effect of dissolved HNO₃, *Geophysical Research Letters*, 24 (9), 1087-1090, 1997.
- Hanson, D.R., Surface-specific reactions on liquids, *Journal of Physical Chemistry A*, 101 (25), 4998-5001, 1997.
- Hanson, D.R., Reaction of ClONO₂ with H₂O and HCl in sulfuric acid and HNO₃/H₂SO₄/H₂O mixtures, *Journal of Physical Chemistry A*, 102 (25), 4794-4807, 1998.
- Harder, J.W., and J.W. Brault, Atmospheric measurements of water vapor in the 442-nm region, *Journal of Geophysical Research*, 102 (D5), 6245-6252, 1997.

- Harder, J.W., A. Fried, S. Sewell, and B. Henry, Comparison of tunable diode laser and long-path ultraviolet/visible spectroscopic measurements of ambient formaldehyde concentrations during the 1993 OH Photochemistry Experiment, *Journal of Geophysical Research*, 102 (D5), 6267-6282, 1997.
- Harder, J.W., E.J. Williams, K. Baumann, and F.C. Fehsenfeld, Ground-based comparison of NO₂, H₂O, and O₃ measured by long-path and in situ techniques during the 1993 Tropospheric OH Photochemistry Experiment, *Journal of Geophysical Research*, 102 (D5), 6227-6243, 1997.
- Harder, J.W., R.O. Jakoubek, and G.H. Mount, Measurement of tropospheric trace gases by long-path differential absorption spectroscopy during the 1993 OH Photochemistry Experiment, *Journal of Geophysical Research*, 102 (D5), 6215-6226, 1997.
- Harder, J.W., J.W. Brault, P.V. Johnston, and G.H. Mount, Temperature dependent NO₂ cross sections at high spectral resolution, *Journal of Geophysical Research*, 102 (D3), 3861-3879, 1997.
- Harley, R.A., S.A. McKeen, J. Pearson, M.O. Rodgers, and W.A. Lonneman, Analysis of motor vehicle emissions during the Nashville/Middle Tennessee Ozone Study, *Journal of Geophysical Research*, 106 (D4), 3559-3567, 2000.
- Harries, J.E., J.M. Russell III, J. Park, A.F. Tuck, and S.R. Drayson, Observations of absorbing layers in the Antarctic stratosphere in October 1991, *Quarterly Journal of the Royal Meteorological Society*, 121, 655-667, 1995.
- Harries, J.E., J.M. Russell III, A.F. Tuck, L.L. Gordley, P. Purcell, K. Stone, P.M. Bevilacqua, M. Gunson, G. Nedoluha, and W.A. Traub, Validation of measurements of water vapor from the Halogen Occultation Experiment, HALOE, *Journal of Geophysical Research*, 101, 10205-10216, 1996.
- Harris, N.R.P., J.C. Farman, and D.W. Fahey, Comment on "Effects of cosmic rays on atmospheric chlorofluorocarbon dissociation and ozone depletion", *Physical Review Letters*, 89, 219801-1, 2002.
- Hartten, L.M., Synoptic settings of westerly wind bursts, *Journal of Geophysical Research*, 101 (D12), 16997-17019, 1996.
- Hartten, L.M., and D.S. Gutzler, Estimates of large-scale divergence in the lower troposphere over the western equatorial Pacific, *Journal of Geophysical Research*, 103 (D20), 25895-25904, 1998.
- Hartten, L.M., Reconciliation of surface and profiler winds at ISS sites, *Journal of Atmospheric and Oceanic Technology*, 15, 826-834, 1998.
- Hartten, L.M., and K.S. Gage, Check w/Leslie Has abstract, 1999.
- Hartten, L.M., and K.S. Gage, ENSO's impact on the annual cycle: The view from Galápagos, *Geophysical Research Letters*, 27 (3), 385-388, 2000.
- Hartten, L.M., and P.A. Datulayta, Variations in the daily cycle of winds over the Galápagos, *Geophysical Research Letters*, submitted, 2002.
- Hartten, L.M., and P.A. Datulayta, Seasonal and Interannual Variations in the daily cycle of winds over the Galapagos, *Journal of Climate*, submitted, 2004.
- Harwood, M.H., J.B. Burkholder, M. Hunter, R.W. Fox, and A.R. Ravishankara, Absorption cross sections and self-reaction kinetics of the IO radical, *Journal of Physical Chemistry A*, 101 (4), 858-863, 1997.
- Harwood, M.H., J.B. Burkholder, and A.R. Ravishankara, Photodissociation of BrONO₂ and N₂O₅: Quantum yields for NO₃ production at 248, 308, and 352.5 nm, *Journal of Physical Chemistry A*, 102 (8), 1309-1317, 1998.
- Harwood, M.H., J.M. Roberts, G.J. Frost, A.R. Ravishankara, and J.B. Burkholder, Photochemical studies of CH₃C(O)OONO₂ (PAN) and CH₃CH₂C(O)OONO₂ (PPN): NO₃ quantum yields, *The Journal of Physical Chemistry A*, 107, doi: 10.1021/jp0264230, pp. 1148-1154, 2003.
- Hauglustaine, D.A., B.A. Ridley, S. Solomon, P.G. Hess, and S. Madronich, HNO₃/NO_x ratio in the remote troposphere during MLOPEX 2: Evidence for nitric acid reduction on carbonaceous aerosols, *Geophysical Research Letters*, 23 (19), 2609-2612, 1996.
- Hauglustaine, D.A., S. Madronich, B.A. Ridley, J.G. Walega, C.A. Cantrell, R.E. Shetter, and G. Hübner, Observed and model-calculated photostationary state at Mauna Loa Observatory during MLOPEX 2, *Journal of Geophysical Research*, 101 (D9), 14681-14696, 1996.
- Hawes, A.K., S. Solomon, R.W. Portmann, J.S. Daniel, A.O. Langford, H.L. Miller, C.S. Eubank, P. Goldan, C. Wiedinmyer, E. Atlas, A. Hansel, and A. Wisthaler, Airborne observations of vegetation and implications for biogenic emission characterization, *Journal of Environmental Monitoring*, 5, 977-983, doi:10.1039/b308911h, 2003.
- Heikes, B.G., M. Lee, J. Bradshaw, S. Sandholm, D.D. Davis, J. Crawford, J. Rodriguez, S. Liu, S.A. McKeen, D. Thornton, A. Bandy, G. Gregory, R. Talbot, and D. Blake, Hydrogen peroxide and methylhydroperoxide distributions related to ozone and odd hydrogen over the North Pacific in the fall of 1991, *Journal of Geophysical Research*, 101, 1891-1905, 1996.

- Herman, R.L., D.C. Scott, C.R. Webster, R.D. May, E.J. Moyer, R.J. Salawitch, Y.L. Yung, G.C. Toon, B. Sen, J.J. Margitan, K.H. Rosenlof, H.A. Michelsen, and J.W. Elkins, Tropical entrainment time scales inferred from stratospheric N₂O and CH₄ observations, *Geophysical Research Letters*, 25 (15), 2781-2784, 1998.
- Herman, R.L., K. Drdla, J.R. Spackman, D.F. Hurst, C.R. Webster, J.W. Elkins, E.M. Weinstock, J.G. Anderson, B. Gandrud, G.C. Toon, M.R. Schoeberl, A.E. Andrews, S.C. Wofsy, H. Jost, E.L. Atlas, P.J. Popp, and T.P. Bui, Hydration, dehydration, and the total hydrogen budget of the 1999-2000 winter Arctic stratosphere, *Journal of Geophysical Research*, submitted, 2001.
- Herndon, S.C., K.D. Froyd, E.R. Lovejoy, and A.R. Ravishankara, How rapidly does the SH radical react with N₂O?, *Journal of Physical Chemistry A*, 103 (34), 6778-6785, 1999.
- Herndon, S.C., T. Gierczak, R.K. Talukdar, and A.R. Ravishankara, Kinetics of the reaction of OH with several alkyl halides, *Physical Chemistry Chemical Physics*, 3, 4529-4535, 2001.
- Hicke, J., A. Tuck, and W. Smith, A comparison of Antarctic stratospheric radiative heating rates calculated from high-resolution interferometer sounder and U.K. Meteorological Office data, *Journal of Geophysical Research*, 103 (D16), 19691-19707, 1998.
- Hicke, J., A. Tuck, and H. Vömel, Lower stratospheric radiative heating rates and sensitivities calculated from Antarctic balloon observations, *Journal of Geophysical Research*, 104 (D8), 9293-9308, 1999.
- Hicke, J., and A. Tuck, Tropospheric clouds and lower stratospheric heating rates: Results from late winter in the Southern Hemisphere, *Journal of Geophysical Research*, 104 (D8), 9309-9324, 1999.
- Hicke, J., and A.F. Tuck, Polar stratospheric cloud impacts on Antarctic stratospheric heating rates, *Quarterly Journal of the Royal Meteorological Society*, 127, 1645-1658, 2001.
- Hoell, J.M., D.D. Davis, S.C. Liu, R. Newell, M. Shipham, H. Akimoto, R.J. McNeal, R.J. Bendura, and J.W. Drewry, The Pacific Exploratory Mission-West A (PEM-West A): September-October, 1991, *Journal of Geophysical Research*, 101 (D1), 1641-1653, 1996.
- Hoell, J.M., D.D. Davis, S.C. Liu, R.E. Newell, H. Akimoto, R.J. McNeal, and R.J. Bendura, The Pacific Exploratory Mission-West Phase B: February-March, 1994, *Journal of Geophysical Research*, 102 (D23), 28223-28239, 1997.
- Hofmann, D.J., S.J. Oltmans, W.D. Komhyr, J.M. Harris, J.A. Lathrop, A.O. Langford, T. Deshler, B.J. Johnson, A. Torres, and W.A. Matthews, Ozone loss in the lower stratosphere over the United States in 1992-1993: Evidence for heterogeneous chemistry on the Pinatubo aerosol, *Geophysical Research Letters*, 21 (1), 65-68, 1994.
- Hofmann, D., P. Bonasoni, M. De Maziere, F. Evangelisti, G. Giovanelli, A. Goldman, F. Goutail, J. Harder, R. Jakoubek, P. Johnston, J. Kerr, W. Matthews, T. McElroy, R. McKenzie, G. Mount, U. Platt, J.-P. Pommereau, A. Sarkissian, P. Simon, S. Solomon, J. Stutz, A. Thomas, M. Van Roozendael, and E. Wu, Intercomparison of UV/visible spectrometers for measurements of stratospheric NO₂ for the network for the detection of stratospheric change, *Journal of Geophysical Research*, 100 (D8), 16765-16791, 1995.
- Holloway, J.S., R.O. Jakoubek, D.D. Parrish, C. Gerbig, A. Volz-Thomas, S. Schmitgen, A. Fried, B. Wert, B. Henry, and J.R. Drummond, Airborne intercomparison of vacuum ultraviolet fluorescence and tunable diode laser absorption measurements of tropospheric carbon monoxide, *Journal of Geophysical Research*, 105 (D19), 24251-24261, 2000.
- Hübner, G., R. Alvarez, P. Daum, R. Dennis, N. Gillani, L. Kleinman, W. Luke, J. Meagher, D. Rider, M. Trainer, and R. Valente, An overview of the airborne activities during the Southern Oxidants Study (SOS) 1995 Nashville/Middle Tennessee Ozone Study, *Journal of Geophysical Research*, 103 (D17), 22245-22259, 1998.
- Hudson, P.K., E.R. Lovejoy, A. Sullivan, J.B. Nowak, L.G. Huey, O. Cooper, D.J. Cziczo, J.A. de Gouw, F.C. Fehsenfeld, J.S. Holloway, G. Hübner, B.G. Lafleur, D.M. Murphy, J.A. Neuman, D.K. Nicks, Jr., D. Orsini, D.D. Parrish, T.B. Ryerson, D.J. Tanner, C. Warneke, R. Weber, and J.C. Wilson, Chemical and microphysical characteristics of aerosols in the free troposphere near the west coast of North America, *Journal of Geophysical Research*, submitted, doi:2003JD004198, 2003.
- Huey, L.G., D.R. Hanson, and E.R. Lovejoy, Atmospheric fate of CF₃OH 1: Gas phase thermal decomposition, *Journal of Geophysical Research*, 100 (D9), 18771-18774, 1995.
- Huey, L.G., D.R. Hanson, and C.J. Howard, Reactions of SF₆⁻ and I⁻ with atmospheric trace gases, *Journal of Physical Chemistry*, 99, 5001-5008, 1995.
- Huey, L.G., E.J. Dunlea, and C.J. Howard, Gas-phase acidity of CF₃OH, *Journal of Physical Chemistry*, 100 (16), 6504-6508, 1996.
- Huey, L.G., The kinetics of the reactions of Cl⁻, O⁻, and O₂⁻ with HNO₃: Implications for measurements of HNO₃ in the atmosphere, *International Journal of Mass Spectrometry and Ion Processes*, 153, 145-150, 1996.
- Huey, L.G., P.W. Villalta, E.J. Dunlea, D.R. Hanson, and C.J. Howard, Reactions of CF₃O⁻ with atmospheric trace gases, *Journal of Physical Chemistry*, 100, 190-194, 1996.
- Huey, L.G., and E.R. Lovejoy, Reactions of SiF₅⁻ with atmospheric trace gases: Ion chemistry for chemical ionization detection of

- HNO₃ in the troposphere, *International Journal of Mass Spectrometry and Ion Processes*, 155, 133-140, 1996.
- Huey, L.G., E.J. Dunlea, E.R. Lovejoy, D.R. Hanson, R.B. Norton, F.C. Fehsenfeld, and C.J. Howard, Fast time response measurements of HNO₃ in air with a chemical ionization mass spectrometer, *Journal of Geophysical Research*, 103 (D3), 3355-3360, 1998.
- Imamura, T., Y. Rudich, R.K. Talukdar, R.W. Fox, and A.R. Ravishankara, Uptake of NO₃ on water solutions: Rate coefficients for reactions of NO₃ with cloud water constituents, *Journal of Physical Chemistry A*, 101 (12), 2316-2322, 1997.
- Iraci, L.T., A.M. Middlebrook, and M.A. Tolbert, Laboratory studies of the formation of polar stratospheric clouds: Nitric acid condensation on thin sulfuric acid films, *Journal of Geophysical Research*, 100, 20969-20977, 1995.
- Jaeglé, L., C.R. Webster, R.D. May, D.W. Fahey, E.L. Woodbridge, E.R. Keim, R.S. Gao, M.H. Proffitt, R.M. Stimpfle, R.J. Salawitch, S.C. Wofsy, and L. Pfister, In situ measurements of the NO₂/NO ratio for testing atmospheric photochemical models, *Geophysical Research Letters*, 21, 2555-2558, 1994.
- Jaeglé, L., C.R. Webster, R.D. May, D.C. Scott, R.M. Stimpfle, D.W. Kohn, P.O. Wennberg, T.F. Hanisco, R.C. Cohen, M.H. Proffitt, K.K. Kelly, J. Elkins, D. Baumgardner, J.E. Dye, J.C. Wilson, R.F. Pueschel, K.R. Chan, R.J. Salawitch, A.F. Tuck, S.J. Hovde, and Y.L. Yung, Evolution and stoichiometry of heterogeneous processing in the Antarctic stratosphere, *Journal of Geophysical Research*, 102 (D11), 13235-13253, 1997.
- Jaeglé, L., D.J. Jacob, P.O. Wennberg, C.M. Spivakovsky, T.F. Hanisco, E.J. Lanzendorf, E.J. Hintsa, D.W. Fahey, E.R. Keim, M.H. Proffitt, E.L. Atlas, F. Flocke, S. Schauffler, C.T. McElroy, C. Midwinter, L. Pfister, and J.C. Wilson, Observed OH and HO₂ in the upper troposphere suggest a major source from convective injection of peroxides, *Geophysical Research Letters*, 24 (24), 3181-3184, 1997.
- Jaffe, D., J. Snow, and O. Cooper, The April 2001 Asian dust events: Transport and substantial impact on surface particulate matter concentrations across the United States, *EOS, Transactions, American Geophysical Union*, in press, 2003.
- Jaffe, D., H. Price, D.D. Parrish, A. Goldstein, and J. Harris, Increasing background ozone during spring on the west coast of North America, *Geophysical Research Letters*, 30 (12), 1613, doi:10.1029/2003GL017024, 2003.
- Jensen, N.R., D.R. Hanson, and C.J. Howard, Temperature dependence of the gas phase reactions of CF₃O with CH₄ and NO, *Journal of Physical Chemistry*, 98, 8574-8579, 1994.
- Jiménez, E., M.K. Gilles, and A.R. Ravishankara, Kinetics of the reactions of the hydroxyl radical with CH₃OH and C₂H₅OH between 235 and 360 K, *Journal of Photochemistry and Photobiology A: Chemistry*, 157, doi:10.1016/S1010-6030(03)00073-X, pp. 237-245, 2003.
- Jiménez, E., T. Gierczak, H. Stark, J.B. Burkholder, and A.R. Ravishankara, Reaction of OH with HO₂NO₂ (Peroxynitric Acid, PNA): Rate coefficients between 218 and 335 K and product yields at 298 K, *Journal of Physical Chemistry*, submitted, 2003.
- Jobson, B.T., G.J. Frost, S.A. McKeen, T.B. Ryerson, M.P. Buhr, D.D. Parrish, M. Trainer, and F.C. Fehsenfeld, Hydrogen peroxide dry deposition lifetime determined from observed loss rates in a power plant plume, *Journal of Geophysical Research*, 103 (D17), 22617-22628, 1998.
- Jobson, B.T., D.D. Parrish, P. Goldan, W. Kuster, F.C. Fehsenfeld, D.R. Blake, N.J. Blake, and H. Niki, Spatial and temporal variability of nonmethane hydrocarbon mixing ratios and their relation to photochemical lifetime, *Journal of Geophysical Research*, 103 (D11), 13557-13567, 1998.
- Jobson, B.T., S.A. McKeen, D.D. Parrish, F.C. Fehsenfeld, D.R. Blake, A.H. Goldstein, S.M. Schauffler, and J.W. Elkins, Trace gas mixing ratio variability versus lifetime in the troposphere and stratosphere: Observations, *Journal of Geophysical Research*, 104 (D13), 16091-16113, 1999.
- Johnston, P.E., L.M. Hartten, C.H. Love, D.A. Carter, and K.S. Gage, Range errors in wind profiling caused by strong reflectivity gradients, *Journal of Atmospheric and Oceanic Technology*, 19, 934-953, 2002.
- Jordan, J.R., R.J. Lataitis, and D.A. Carter, Removing ground and intermittent clutter contamination from wind profiler signals using wavelet transforms, *Journal of Atmospheric and Oceanic Technology*, 14, 1280-1297, 1997.
- Junntila, M.-L., W.J. Lafferty, and J.B. Burkholder, The high-resolution spectrum of the n₁ band and ground state rotational constants of HOCl, *Journal of Molecular Spectroscopy*, 164, 583-585, 1994.
- Kaluzhny, M., and D.M. Murphy, Innovations on a quartz crystal microbalance frost-point hygrometer, *Journal of Atmospheric and Oceanic Technology*, 12 (5), 1129-1133, 1995.
- Kärcher, B., and D.W. Fahey, The role of sulfur emissions in volatile particle formation in jet aircraft exhaust plumes, *Geophysical Research Letters*, 24, 389-392, 1997.
- Kärcher, B., and S. Solomon, On the composition and optical extinction of particles in the tropopause region, *Journal of Geophysical Research*, 104 (D22), 27441-27459, 1999.

- Kasibhatla, P., H. Levy II, W.J. Moxim, S.N. Pandis, J.J. Corbett, M.C. Peterson, R.E. Honrath, G.J. Frost, K. Knapp, D.D. Parrish, and T.B. Ryerson, Do emissions from ships have a significant impact on concentrations of nitrogen oxides in the marine boundary layer?, *Geophysical Research Letters*, 27 (15), 2229-2232, 2000.
- Kawa, S.R., D.W. Fahey, J.C. Wilson, M.R. Schoeberl, A.R. Douglass, R.S. Stolarski, E.L. Woodbridge, H. Jonsson, L.R. Lait, P.A. Newman, M.H. Proffitt, D.E. Anderson, M. Loewenstein, K.R. Chan, C.R. Webster, R.D. May, and K.K. Kelly, Interpretation of NO_x/NO_y observations from AASE-II using a model of chemistry along trajectories, *Geophysical Research Letters*, 20 (22), 2507-2510, 1993.
- Keenan, T.D., S. Rutledge, R. Carbone, J.C. Wilson, T. Takahaski, P.T. May, N. Platt, J. Hacker, S. Sekelsky, M. Moncrieff, K. Saito, G. Holland, A. Crook, and K.S. Gage, The Maritime Continent Thunderstorm Experiment (MCTEX): Overview and some results, *Bulletin of the American Meteorological Society*, 81 (10), 2433-2455, 2000.
- Kegley-Owen, C.S., M.K. Gilles, J.B. Burkholder, and A.R. Ravishankara, Rate coefficient measurements for the reaction OH + ClO - → products, *Journal of Physical Chemistry A*, 103 (26), 5040-5048, 1999.
- Keim, E.R., D.W. Fahey, L.A. Del Negro, E.L. Woodbridge, R.S. Gao, P.O. Wennberg, R.C. Cohen, R.M. Stimpfle, K.K. Kelly, E.J. Hintsza, J.C. Wilson, H.H. Jonsson, J.E. Dye, D. Baumgardner, S.R. Kawa, R.J. Salawitch, M.H. Proffitt, M. Loewenstein, J.R. Podolske, and K.R. Chan, Observations of large reductions in the NO/NO_y ratio near the midlatitude tropopause and the role of heterogeneous chemistry, *Geophysical Research Letters*, 23, 3223-3226, 1996.
- Keim, E.R., M. Loewenstein, J.R. Podolske, D.W. Fahey, R.S. Gao, E.L. Woodbridge, R.C. Wamsley, S.G. Donnelly, L.A. Del Negro, C.D. Nevison, S. Solomon, K.H. Rosenlof, C.J. Scott, M.K.W. Ko, D. Weisenstein, and K.R. Chan, Measurements of the NO_y-N₂O correlation in the lower stratosphere: Latitudinal and seasonal changes and model comparisons, *Journal of Geophysical Research*, 102 (D11), 13193-13212, 1997.
- Keim, E.R., S.A. McKeen, R.S. Gao, S.G. Donnelly, R.C. Wamsley, L.A. Del Negro, D.W. Fahey, T.F. Hanisco, E.J. Lanzendorf, M.H. Proffitt, J.J. Margitan, E.F. Hintsza, L. Jaeglé, C.R. Webster, R.D. May, D.C. Scott, R.J. Salawitch, J.C. Wilson, C.T. McElroy, E.L. Atlas, F. Flocke, and T.P. Bui, NO_y partitioning from measurements of nitrogen and hydrogen radicals in the upper troposphere, *Geophysical Research Letters*, 26 (1), 51-54, 1999.
- Kelly, K.K., M.H. Proffitt, K.R. Chan, M. Loewenstein, J.R. Podolske, S.E. Strahan, J.C. Wilson, and D. Kley, Water vapor and cloud water measurements over Darwin during the STEP 1987 tropical mission, *Journal of Geophysical Research*, 98 (D5), 8713-8723, 1993.
- Kiehl, J.T., T.L. Schneider, R.W. Portmann, and S. Solomon, Climate forcing due to tropospheric and stratospheric ozone, *Journal of Geophysical Research*, 104 (D24), 31239-31254, 1999.
- Kiladis, G.N., and K.M. Weickmann, Horizontal structure and seasonality of large-scale circulations associated with submonthly tropical convection, *Monthly Weather Review*, 125, 1997-2013, 1997.
- Kiladis, G.N., Observations of Rossby waves linked to convection over the eastern tropical Pacific, *Journal of the Atmospheric Sciences*, 55, 321-339, 1998.
- Kiladis, G.N., K.H. Straub, G.C. Reid, and K.S. Gage, Aspects of interannual and intraseasonal variability of the tropopause and lower stratosphere, *Quarterly Journal of the Royal Meteorological Society*, 127, 1961-1984, 2001.
- Kim, C.-H., S.M. Kreidenweis, G. Feingold, G.J. Frost, and M. Trainer, Modeling cloud effects on hydrogen peroxide and methylhydroperoxide in the marine atmosphere, *Journal of Geophysical Research*, 107 (D2), 10.129/2000JD000285, 2002.
- Kjaergaard, H.G., T.W. Robinson, D.L. Howard, J.E. Headrick, V. Vaida, and J.S. Daniel, Complexes of importance to the absorption of solar radiation, *The Journal of Physical Chemistry A*, in press, 2003.
- Kleinman, L.I., P.H. Daum, S.R. Springston, W.R. Leitch, C.M. Banic, G.A. Isaac, B.T. Jobson, and H. Niki, Measurement of O₃ and related compounds over southern Nova Scotia: 2, Photochemical age and vertical transport, *Journal of Geophysical Research*, 101 (D22), 29061-29074, 1996.
- Kleinman, L.I., P.H. Daum, J.H. Lee, Y.-N. Lee, J. Weinstein-Lloyd, S.R. Springston, M. Buhr, and B.T. Jobson, Photochemistry of O₃ and related compounds over Southern Nova Scotia, *Journal of Geophysical Research*, 103 (D11), 13519-13529, 1998.
- Knight, G., A.R. Ravishankara, and J.B. Burkholder, Laboratory studies of OBrO, *The Journal of Physical Chemistry A*, 104 (47), 11121-11125, 2000.
- Knight, G., A.R. Ravishankara, and J.B. Burkholder, Reactions of tropospheric condensed matter, 2000.
- Knight, G., A.R. Ravishankara, and J.B. Burkholder, UV absorption cross sections of HO₂NO₂ between 343 and 273 K, *Physical Chemistry Chemical Physics*, 4, 1432-1437, doi:10.1039/b108904h, 2002.
- Knollenberg, R.G., K.K. Kelly, and J.C. Wilson, Measurements of high number densities of ice crystals in the tops of tropical cumulonimbus, *Journal of Geophysical Research*, 98 (D5), 8639-8664, 1993.
- Koch, S.E., and W.L. Clark, A nonclassical cold front observed during COPS-91: Frontal structure and the process of severe storm

- initiation, *Journal of the Atmospheric Sciences*, 56, 2862-2890, 1999.
- Kondo, Y., W.A. Matthews, S. Solomon, M. Koike, M. Hayashi, K. Yamazaki, H. Nakajima, and K. Tsukui, Ground-based measurements of column amounts of NO₂ and O₃ over Syowa Station, Antarctica, *Journal of Geophysical Research*, 99 (D7), 14535-14548, 1994.
- Kondo, Y., S. Kawakami, M. Koike, D.W. Fahey, H. Nakajima, Y. Zhao, N. Toriyama, M. Kanada, G.W. Sachse, and G.L. Gregory, Performance of an aircraft instrument for the measurement of NO_y, *Journal of Geophysical Research*, 102 (D23), 28663-28671, 1997.
- Konopka, P., J.-U. Grooß, G. Günther, D.S. McKenna, R. Müller, J.W. Elkins, D.W. Fahey, and P.J. Popp, Weak impact of mixing on chlorine deactivation during SOLVE/THESEO 2000: Lagrangian modeling (CLaMS) versus ER-2 in situ observations, *Journal of Geophysical Research*, 108 (D5), 8324, doi:10.1029/2001JD000876, 2003.
- Kovacs, T.A., W.H. Brune, H. Harder, M. Martinez, J.B. Simpas, G.J. Frost, E.J. Williams, T. Jobson, C. Stroud, V.L. Young, A. Fried, and B. Wert, Direct measurements of urban OH reactivity during Nashville SOS in summer 1999, *Journal of Environmental Monitoring*, 5, 68-74, DOI: 10.1039/b204339d, 2003.
- Kritz, M.A., S.W. Rosner, K.K. Kelly, M. Loewenstein, and K.R. Chan, Radon measurements in the lower tropical stratosphere: Evidence for rapid vertical transport and dehydration of tropospheric air, *Journal of Geophysical Research*, 98 (D5), 8725-8736, 1993.
- Kudeki, E., C.D. Fawcett, W.L. Ecklund, and P.E. Johnston, Equatorial 150-km irregularities observed at Pohnpei, *Geophysical Research Letters*, 25 (21), 4079-4082, 1998.
- Kuster, W.C., B.T. Jobson, T. Karl, D. Riemer, E.C. Apel, P.D. Goldan, and F.C. Fehsenfeld, Intercomparison of volatile organic carbon measurement techniques and data at La Porte during the TexAQS2000 Air Quality Study, *Journal of Geophysical Research*, submitted, 2003.
- Lamarque, J.-F., A.O. Langford, and M.H. Proffitt, Cross-tropopause mixing of ozone through gravity wave breaking: Observation and modeling, *Journal of Geophysical Research*, 101 (D17), 22969-22976, 1996.
- Langford, A.O., Identification and correction of analog-to-digital-converter nonlinearities and their implications for differential absorption lidar measurements, *Applied Optics*, 34 (36), 8330-8340, 1995.
- Langford, A.O., T.J. O'Leary, M.H. Proffitt, and M.H. Hitchman, Transport of the Pinatubo volcanic aerosol to a northern midlatitude site, *Journal of Geophysical Research*, 100 (D5), 9007-9016, 1995.
- Langford, A.O., M.H. Proffitt, T.E. Van Zandt, and J.-F. Lamarque, Modulation of tropospheric ozone by a propagating gravity wave, *Journal of Geophysical Research*, 101 (D21), 26605-26613, 1996.
- Langford, A.O., C.D. Masters, M.H. Proffitt, E.-Y. Hsie, and A.F. Tuck, Ozone measurements in a tropopause fold associated with a cut-off low system, *Geophysical Research Letters*, 23 (18), 2501-2504, 1996.
- Langford, A.O., C.D. Masters, M.H. Proffitt, E.-Y. Hsie, and A.F. Tuck, Correction to "Ozone measurements in a tropopause fold associated with a cut-off low system", *Geophysical Research Letters*, 24 (1), 109, 1997.
- Langford, A.O., and S.J. Reid, Dissipation and mixing of a small-scale stratospheric intrusion in the upper troposphere, *Journal of Geophysical Research*, 103 (D23), 31265-31276, 1998.
- Langford, A.O., T.J. O'Leary, C.D. Masters, K.C. Aikin, and M.H. Proffitt, Modulation of middle and upper tropospheric ozone at northern midlatitudes by the El Nino/Southern Oscillation, *Geophysical Research Letters*, 25 (14), 2667-2670, 1998.
- Langford, A.O., Stratosphere-troposphere exchange at the subtropical jet: Contribution to the tropospheric ozone budget at midlatitudes, *Geophysical Research Letters*, 26 (16), 2449-2452, 1999.
- Lee, Y.-N., X. Zhou, L.I. Kleinman, L.J. Nunnermacker, S.R. Springston, P.H. Daum, L. Newman, W.G. Keigley, M.W. Holdren, C.W. Spicer, V. Young, B. Fu, D.D. Parrish, J. Holloway, J. Williams, J.M. Roberts, T.B. Ryerson, and F.C. Fehsenfeld, Atmospheric chemistry and distribution of formaldehyde and several multioxxygenated carbonyl compounds during the 1995 Nashville/Middle Tennessee Ozone Study, *Journal of Geophysical Research*, 103 (D17), 22449-22462, 1998.
- Lee, S.-H., D.M. Murphy, D.S. Thomson, and A.M. Middlebrook, Chemical components of single particles measured with Particle Analysis by Laser Mass Spectrometry (PALMS) during the Atlanta SuperSite Project: Focus on organic/sulfate, lead, soot, and mineral particles, *Journal of Geophysical Research*, 107 (D1), doi: 10.1029/2000JD000011, 2002.
- Lee, S.-H., D.M. Murphy, D.S. Thomson, and A.M. Middlebrook, Nitrate and oxidized organic ions in single particle mass spectra during the 1999 Atlanta Supersite Project, *Journal of Geophysical Research*, 107 (D1), 8417, doi:10.1029/2001JD001455, 2003.
- Leibrock, E., and L.G. Huey, Ion chemistry for the detection of isoprene and other volatile organic compounds in ambient air, *Geophysical Research Letters*, 27 (12), 1719-1722, 2000.

- Lelieveld, J., H. Berresheim, S. Borrmann, P.J. Crutzen, F.J. Dentener, H. Fischer, J. Feichter, P.J. Flatau, J. Heland, R. Holzinger, R. Korrman, M.G. Lawrence, Z. Levin, K.M. Markowicz, N. Mihalopoulos, A. Minikin, V. Ramanathan, M. de Reus, G.J. Roelofs, H.A. Scheeren, J. Sciare, H. Schlager, M. Schultz, P. Siegmund, B. Steil, E.G. Stephanou, P. Stier, M. Traub, C. Warneke, J. Williams, and H. Ziereis, Global air pollution crossroads over the Mediterranean, *Science*, 298, 794-799, 2002.
- LeMone, M.A., R.L. Grossman, R.T. McMillen, K.-N. Liou, S.C. Ou, S. McKeen, W. Angevine, K. Ikeda, and F. Chen, Cases-97: Late-morning warming and moistening of the convective boundary layer over the Walnut River watershed, *Boundary-Layer Meteorology*, 104, 1-52, 2002.
- Li, Q., D.J. Jacob, I. Bey, P.I. Palmer, D. B.N., B.D. Field, R.V. Martin, A.M. Fiore, R.M. Yantosca, D.D. Parrish, P.G. Simmonds, and S.J. Oltmans, Transatlantic transport of pollution and its effects on surface ozone in Europe and North America, *Journal of Geophysical Research*, 107 (D13), 4166, doi:10.1029/2001JD001422, 2002.
- Li, Q., D. Jacob, and D.D. Parrish, Export of NO_y from the North American boundary layer: Reconciling aircraft observations and global model budgets, *Journal of Geophysical Research*, submitted, doi:2003JD004086, 2003.
- Liebmann, B., G.N. Kiladis, J.A. Marengo, T. Ambrizzi, and J.D. Glick, Submonthly convective variability over South America and the South Atlantic Convergence Zone, *Journal of Climate*, 12, 1877-1891, 1999.
- Liebmann, B., G.N. Kiladis, C.S. Vera, A.C. Saulo, and L.M.V. Carvalho, Subseasonal variations of rainfall in the vicinity of the South American low-level jet stream and comparison to those in the South Atlantic convergence zone, *Journal of Climate*, in press, 2003.
- Lin, X., and W.L. Chameides, CCN formation from DMS oxidation without SO₂ acting as an intermediate, *Geophysical Research Letters*, 20 (7), 579-582, 1993.
- Lin, X., W.L. Chameides, C.S. Kiang, A.W. Stelson, and H. Berresheim, Reply (93JD01193), *Journal of Geophysical Research*, 98 (D6), 10815-10817, 1993.
- Lin, X., W.L. Chameides, C.S. Kiang, A.W. Stelson, and H. Berresheim, Reply (93JD02410), *Journal of Geophysical Research*, 98 (D11), 20815-20816, 1993.
- Lin, X., B.A. Ridley, J.G. Walega, G. Hübner, S.A. McKeen, E.-Y. Hsie, M. Trainer, F.C. Fehsenfeld, and S.C. Liu, Parameterization of subgrid scale convective cloud transport in a mesoscale regional chemistry model, *Journal of Geophysical Research*, 99 (D12), 25615-25630, 1994.
- Lin, X., F. Zaucker, E.Y. Hsie, M.K. Trainer, and S.A. McKeen, Radon 222 simulations as a test of a three-dimensional regional transport model, *Journal of Geophysical Research*, 101 (D22), 29165-29177, 1996.
- Lin, X., M. Trainer, and E.-Y. Hsie, A modeling study of tropospheric species during the North Atlantic Regional Experiment (NARE), *Journal of Geophysical Research*, 103 (D11), 13593-13613, 1998.
- Liu, S.C., S.A. McKeen, E.-Y. Hsie, X. Lin, K.K. Kelly, J.D. Bradshaw, S.T. Sandholm, E.V. Browell, G.L. Gregory, G.W. Sachse, A.R. Bandy, D.C. Thornton, D.R. Blake, F.S. Rowland, R. Newell, B.G. Heikes, H. Singh, and R.W. Talbot, A model study of tropospheric trace species distributions during PEM-West A, *Journal of Geophysical Research*, 101 (D1), 2073-2085, 1996.
- Loewenstein, M., J.R. Podolske, D.W. Fahey, E.L. Woodbridge, P. Tin, A. Weaver, P.A. Newman, S.E. Strahan, S.R. Kawa, M.R. Schoeberl, and L.R. Lait, New observations of the NO_y/N₂O correlation in the lower stratosphere, *Geophysical Research Letters*, 20 (22), 2531-2534, 1993.
- Loewenstein, M., H. Jost, J.B. Greenblatt, J.R. Podolske, R.S. Gao, P.J. Popp, G.C. Toon, C.R. Webster, R.L. Herman, D.F. Hurst, J.W. Elkins, S.M. Schauffler, and E.L. Atlas, An NO_y^{*} algorithm for Arctic winter 2000, *Journal of Geophysical Research*, submitted, 2001.
- Longfellow, C.A., T. Imamura, A.R. Ravishankara, and D.R. Hanson, HONO solubility and heterogeneous reactivity on sulfuric acid surfaces, *Journal of Physical Chemistry A*, 102 (19), 3323-3332, 1998.
- Longfellow, C.A., A.R. Ravishankara, and D.R. Hanson, Reactive uptake on hydrocarbon soot: Focus on NO₂, *Journal of Geophysical Research*, 104 (D11), 13833-13840, 1999.
- Longfellow, C.A., A.R. Ravishankara, and D.R. Hanson, Reactive and nonreactive uptake on hydrocarbon soot: HNO₃, O₃, and N₂O₅, *Journal of Geophysical Research*, 105 (D19), 24345-24350, 2000.
- Loomis, R.A., S.R. Leone, and M.K. Gilles, Novel five-membered ring intermediates in gas phase reactions, *Research on Chemical Intermediates*, 24 (7), 707-753, 1998.
- Lovejoy, E.R., A.R. Ravishankara, and C.J. Howard, Yield of ¹⁶OS¹⁸O from the ¹⁸OH initiated oxidation of CS₂ in ¹⁶O₂, *International Journal of Chemical Kinetics*, 26, 551-560, 1994.
- Lovejoy, E.R., L.G. Huey, and D.R. Hanson, Atmospheric fate of CF₃OH: 2, Heterogeneous reaction, *Journal of Geophysical Research*, 100 (D9), 18775-18780, 1995.

- Lovejoy, E.R., and D.R. Hanson, Measurement of the kinetics of reactive uptake of submicron sulfuric acid particles, *Journal of Physical Chemistry*, 99 (7), 2080-2087, 1995.
- Lovejoy, E.R., D.R. Hanson, and L.G. Huey, Kinetics and products of the gas-phase reaction of SO₃ with water, *Journal of Physical Chemistry*, 100 (51), 19911-19916, 1996.
- Lovejoy, E.R., and D.R. Hanson, Kinetics and products of the reaction SO₃ + NH₃ + N₂, *Journal of Physical Chemistry*, 100 (10), 4459-4465, 1996.
- Lovejoy, E.R., Kinetics and thermodynamics of the gas phase reaction SO₃ + NH₃ + N₂ \leftrightarrow H₃NSO₃ + N₂, *Journal of Physical Chemistry A*, 101 (27), 4950-4953, 1997.
- Lovejoy, E.R., Ion trap studies of H⁺(H₂SO₄)_m(H₂O)_n reactions with water, ammonia, and a variety of organic compounds, *International Journal of Mass Spectrometry*, 190/191, 231-241, 1998.
- Lovejoy, E.R., and R.R. Wilson, Kinetic studies of negative ion reactions in a quadrupole ion trap: Absolute rate coefficients and ion energies, *Journal of Physical Chemistry A*, 102 (13), 2309-2315, 1998.
- Lovejoy, E.R., and R. Bianco, Temperature dependence of cluster ion decomposition in a quadrupole ion trap, *Journal of Physical Chemistry A*, 104 (45), 10280-10287, 2000.
- Lovejoy, E.R., and J. Curtius, Cluster ion thermal decomposition (II): Master equation modeling in the low-pressure limit and fall-off regions. Bond energies for HSO₄⁻(H₂SO₄)_x(HNO₃)_y, *The Journal of Physical Chemistry A*, 105 (48), 10874-10883, 2001.
- Lovejoy, S., D. Schertzer, and A.F. Tuck, Fractal aircraft trajectories and anomalous turbulent statistics, *Geophysical Research Letters*, submitted, 30, doi:10.1029/2003GL018003, 2003.
- Luria, M., R.J. Valente, R.L. Tanner, N.V. Gillani, R.E. Imhoff, S.F. Mueller, K.J. Olszyna, and J.F. Meagher, The evolution of photochemical smog in a power plant plume, *Atmospheric Environment*, 33 (18), 3023-3036, 1999.
- Majda, A.J., B. Khouider, G.N. Kiladis, K.H. Straub, and M.G. Shefter, A model for convectively coupled tropical waves: Nonlinearity, rotation, and comparison with observations, *Journal of the Atmospheric Sciences*, in press, 2003.
- Marengo, J.A., T. Ambrizzi, G.N. Kiladis, and B. Liebmann, Upper-air wave trains over the Pacific Ocean and wintertime cold surges in tropical-subtropical South America leading freezes in southern and southeastern Brazil, *Theoretical and Applied Climatology*, in press, 2001.
- Martinez, M., H. Harder, T.A. Kovacs, J.B. Simpas, J. Bassis, R. Lesher, W.H. Brune, G.J. Frost, E.J. Williams, C.A. Stroud, B.T. Jobson, J.M. Roberts, S.R. Hall, R.E. Shetter, B. Wert, A. Fried, B. Alicke, J. Stutz, V.L. Young, A.B. White, and R.J. Zamora, OH and HO₂ concentrations, sources and loss rates during the Southern Oxidants Study in Nashville, TN, summer 1999, *Journal of Geophysical Research*, in press, 2003.
- Martner, B.E., D.B. Wuertz, B.B. Stankov, R.G. Strauch, E.R. Westwater, K.S. Gage, W.L. Ecklund, C.L. Martin, and W.F. Dabberdt, An evaluation of wind profiler, RASS, and microwave radiometer performance, *Bulletin of the American Meteorological Society*, 74 (4), 599-613, 1993.
- Matsumi, Y., F.J. Comes, G. Hancock, A. Hofzumahaus, A.J. Hynes, M. Kawasaki, and A.R. Ravishankara, Quantum yields for production of O(¹D) in the ultraviolet photolysis of ozone: Recommendation based on evaluation of laboratory data, *Journal of Geophysical Research*, 107 (D3), doi: 10/1029/2001JD000510, 2002.
- Matthews, A.J., and G.N. Kiladis, Interactions between interannual and transient circulations and tropical convection over the Pacific, *Journal of Climate*, 12, 3062-3086, 1999.
- Matthews, A.J., and G.N. Kiladis, The tropical-extratropical interaction between high-frequency transients and the Madden-Julian Oscillation, *Monthly Weather Review*, 127, 661-677, 1999.
- Matthews, A.J., and G.N. Kiladis, A model of Rossby wave linked to convection over the eastern tropical Pacific, *Journal of the Atmospheric Sciences*, 57, 3785-3798, 2000.
- Mauldin III, R.L., A. Wahner, and A.R. Ravishankara, Kinetics and mechanism of the self-reaction of the BrO radical, *Journal of Physical Chemistry*, 97, 7585-7596, 1993.
- Mauldin III, R.L., S. Madronich, S.J. Flocke, F.L. Eisele, G.J. Frost, and A.S.H. Prevot, New insights on HO: Measurements around and in clouds, *Geophysical Research Letters*, 24, 3033-3036, 1997.
- Mauldin III, R.L., J.B. Burkholder, and A.R. Ravishankara, The reaction of O(³P) with OCIO, *International Journal of Chemical Kinetics*, 29, 139-147, 1997.
- Mauldin III, R.L., G.J. Frost, G. Chen, D.J. Tanner, A.S.H. Prevot, D.D. Davis, and F.L. Eisele, OH measurements during the First Aerosol Characterization Experiment (ACE-1): Observations and model comparisons, *Journal of Geophysical Research*, 103, 16713-16729, 1998.
- May, P.T., W.L. Ecklund, and G.D. Hess, Spectral and bispectral characteristics of wind variability at Darwin, Australia observed by a

- VHF radar wind profiler, *Quarterly Journal of the Royal Meteorological Society*, 121, 527-544, 1994.
- May, P.T., A.R. Jameson, T.D. Keenan, and P.E. Johnston, A comparison between polarimetric radar and wind profiler observations of precipitation in tropical showers, *Journal of Applied Meteorology*, 40, 1702-1716, 2001.
- May, P.T., A.R. Jameson, T.D. Keenan, P.E. Johnston, and C. Lucas, Combined wind profiler/polarimetric radar studies of the vertical motion and microphysical characteristics of tropical sea-breeze thunderstorms, *Monthly Weather Review*, 130, 2228-2239, 2002.
- McAfee, J.R., K.S. Gage, and R.G. Strauch, Examples of vertical velocity comparison from collocated VHF and UHF profilers, *Radio Science*, 29 (4), 879-880, 1994.
- McAfee, J.R., K.S. Gage, and R.G. Strauch, Vertical velocities at Platteville, Colorado: An intercomparison of simultaneous measurements by the VHF and UHF profilers, *Radio Science*, 34 (4), 1027-1042, 1995.
- McCabe, D.C., T. Gierczak, R.K. Talukdar, and A.R. Ravishankara, Kinetics of the reaction OH + CO under atmospheric conditions, *Geophysical Research Letters*, 28 (16), 3135-3138, 2001.
- McCabe, D.C., S.S. Brown, M.K. Gilles, R.K. Talukdar, I.W.M. Smith, and A.R. Ravishankara, Kinetics of the removal of OH(n=1) by HNO₃ and DNO₃ from 253-383K, *Journal of Physical Chemistry*, 107, 7762-7769, doi:10.1021/jp0346413, 2003.
- McCaffery, S.J., S.A. McKeen, E.-Y. Hsie, D.D. Parrish, O.R. cooper, J.S. Holloway, G. Hübler, F.C. Fehsenfeld, and M. Trainer, A case study of stratosphere-troposphere exchange during the 1996 North Atlantic Regional Experiment, *Journal of Geophysical Research*, submitted, 2003.
- McClenny, W.A., E.J. Williams, R.C. Cohen, and J. Stutz, Preparing to measure the effects of the NO₂ SIP call: Methods for ambient air monitoring of NO, NO₂, NO_y and individual NO_z species, *Journal of the Air & Waste Management Association*, 52 (5), 542-562, 2002.
- McGee, T.J., M. Gross, U. Singh, P. Kimvilakani, A. Matthews, G. Bodeker, B. Connor, J.J. Tsou, M. Proffitt, and J. Margitan, Vertical profile measurements of ozone at Lauder, New Zealand during ASHOE/MAESA, *Journal of Geophysical Research*, 102 (D11), 13283-13289, 1997.
- McKeen, S.A., and S.C. Liu, Hydrocarbon ratios and photochemical history of air masses, *Geophysical Research Letters*, 20 (21), 2363-2366, 1993.
- McKeen, S.A., S.C. Liu, E.-Y. Hsie, X. Lin., J.D. Bradshaw, S. Smyth, G.L. Gregory, and D.R. Blake, Hydrocarbon ratios during PEM-WEST A: A model perspective, *Journal of Geophysical Research*, 101 (D1), 2087-2109, 1996.
- McKeen, S.A., G.H. Mount, F. Eisele, E.J. Williams, J.H. Harder, P.D. Goldan, W.C. Kuster, S.C. Liu, K. Baumann, D. Tanner, A. Fried, S. Sewell, C. Cantrell, and R. Shetter, Photochemical modeling of hydroxyl and its relationship to other species during the Tropospheric OH Photochemistry Experiment, *Journal of Geophysical Research*, 102 (D5), 6467-6493, 1997.
- McKeen, S.A., T. Gierczak, J.B. Burkholder, P.O. Wennberg, T.F. Hanisco, E.R. Keim, R.S. Gao, S.C. Liu, A.R. Ravishankara, and D.W. Fahey, The photochemistry of acetone in the upper troposphere: A source of odd-hydrogen radicals, *Geophysical Research Letters*, 24 (24), 3177-3180, 1997.
- McKeen, S.A., G. Wotawa, D.D. Parrish, J.S. Holloway, M.P. Buhr, G. Hübler, F.C. Fehsenfeld, and J.F. Meagher, Ozone production from Canadian wildfires during June and July of 1995, *Journal of Geophysical Research*, 107 (D14), 4192, doi:10.1029/2001JD000697, 2002.
- McNider, R.T., W.B. Norris, A.J. Song, R.L. Clymer, S. Gupta, R.M. Banta, R.J. Zamora, A.B. White, and M. Trainer, Meteorological conditions during the 1995 Southern Oxidants Study Nashville/Middle Tennessee Field Intensive, *Journal of Geophysical Research*, 103 (D17), 22225-22243, 1998.
- McPhaden, M.J., A.J. Busalacchi, R. Cheney, J.-R. Donguy, K.S. Gage, D. Halpern, M. Ji, P. Julian, G. Meyers, G.T. Mitchum, P.P. Niiler, J. Picaut, R.W. Reynolds, N. Smith, and K. Takeuchi, The Tropical Ocean Global Atmosphere (TOGA) observing system: A decade of progress, *Journal of Geophysical Research*, 103 (C7), 14169-14240, 1998.
- Meagher, J.F., E.B. Cowling, F.C. Fehsenfeld, and W.J. Parkhurst, Ozone formation and transport in southeastern United States: An overview of the SOS Nashville/Middle Tennessee Ozone Study, *Journal of Geophysical Research*, 103 (D17), 22213-22224, 1998.
- Meagher, J.F., Ozone's janus face, *Forum for Applied Research and Public Policy*, Fall, 52-57, 2001.
- Meehl, G.A., G.N. Kiladis, K.M. Weickmann, M. Wheeler, D.S. Gutzler, and G.P. Compo, Modulation of equatorial subseasonal convective episodes by tropical-extratropical interaction in the Indian and Pacific Ocean regions, *Journal of Geophysical Research*, 101 (D10), 15033-15049, 1996.
- Meehl, G.A., R. Lukas, G.N. Kiladis, and K.M. Weickmann, Time and space scale interactions in the climate system: Implications for climate variability and predictability, *Climate Dynamics*, 17, 753-775, 2001.

- Melamed, M.L., S. Solomon, J.S. Daniel, A.O. Langford, R.W. Portmann, T.B. Ryerson, D.K. Nicks, Jr., and S.A. McKeen, Measuring reactive nitrogen emissions from point sources using visible spectroscopy from aircraft, *Journal of Environmental Monitoring*, 5, 29-34, 2003.
- Mellouki, A., R.K. Talukdar, A.M.R.P. Bopegedera, and C.J. Howard, Study of the kinetics of the reactions of NO₃ with HO₂ and OH, *International Journal of Chemical Kinetics*, 25, 25-39, 1993.
- Mellouki, A., and A.R. Ravishankara, Does the HO₂ radical react with H₂S, CH₃SH, and CH₃SCH₃, *International Journal of Chemical Kinetics*, 26, 355-365, 1994.
- Mellouki, A., R.K. Talukdar, and C.J. Howard, Kinetics of the reactions of HBr with O₃ and HO₂: The yield of HBr from HO₂ + BrO, *Journal of Geophysical Research*, 99 (D11), 22949-22954, 1994.
- Mertens, C.J., M.G. Mlynczak, R.R. Garcia, and R.W. Portmann, A detailed evaluation of the stratospheric heat budget: 1, Radiation transfer, *Journal of Geophysical Research*, 104 (D6), 6021-6038, 1999.
- Middlebrook, A.M., L.T. Iraci, L.S. McNeill, B.G. Koehler, M.A. Wilson, O.W. Saastad, M.A. Tolbert, and D.R. Hanson, Fourier transform-infrared studies of thin H₂SO₄/H₂O films: Formation, water uptake, and solid-liquid phase changes, *Journal of Geophysical Research*, 98 (D11), 20473-20481, 1993.
- Middlebrook, A.M., D.S. Thomson, and D.M. Murphy, On the purity of laboratory-generated sulfuric acid droplets and ambient particles studied by laser mass spectrometry, *Aerosol Science and Technology*, 27, 293-307, 1997.
- Middlebrook, A.M., D.M. Murphy, and D.S. Thomson, Observations of organic material in individual marine particles at Cape Grim during the First Aerosol Characterization Experiment (ACE-1), *Journal of Geophysical Research*, 103 (D13), 16475-16483, 1998.
- Middlebrook, A.M., D.M. Murphy, S.-H. Lee, D.S. Thomson, K.A. Prather, R.J. Wenzel, D.-Y. Liu, D.J. Phares, K.P. Rhoads, A.S. Wexler, M.V. Johnston, J.L. Jimenez, J.T. Jayne, D.R. Worsnop, I. Yourshaw, J.H. Seinfeld, and R.C. Flagan, A comparison of particle mass spectrometers during the 1999 Atlanta Supersites Project, *Journal of Geophysical Research*, 108 (D7), 8424, doi:10.1029/2001JD000660, 2003.
- Miller, H.L., A. Weaver, R.W. Sanders, K. Arpag, and S. Solomon, Measurements of Arctic sunrise surface ozone depletion events at Kangerlussuaq, Greenland (67°N, 51°W), *Tellus*, 49B, 496-509, 1997.
- Miller Jr., H.L., R.W. Sanders, and S. Solomon, Observations and interpretation of column OCIO seasonal cycles at two polar sites, *Journal of Geophysical Research*, 104 (D15), 18769-18783, 1999.
- Mills, M.J., A.O. Langford, T.J. O'Leary, K. Arpag, H.L. Miller, M.H. Proffitt, R.W. Sanders, and S. Solomon, On the relationship between stratospheric aerosols and nitrogen dioxide, *Geophysical Research Letters*, 20 (12), 1187-1190, 1993.
- Mills, M.J., O.B. Toon, and S. Solomon, A 2D microphysical model of the polar stratospheric CN layer, *Geophysical Research Letters*, 26 (8), 1133-1136, 1999.
- Minnis, P., U. Schumann, D.R. Doelling, K.M. Gierens, and D.W. Fahey, Global distribution of contrail radiative forcing, *Geophysical Research Letters*, 26 (13), 1853-1856, 1999.
- Minschwaner, K., A.E. Dessler, J.W. Elkins, C.M. Volk, D.W. Fahey, M. Loewenstein, J.R. Podolske, A.E. Roche, and K.R. Chan, Bulk properties of isentropic mixing into the tropics in the lower stratosphere, *Journal of Geophysical Research*, 101, 9433-9439, 1996.
- Minschwaner, K., T. Canty, and C.R. Burnett, Hydroxyl column abundance measurements: PEPSIOS instrumentation at the Fritz Peak Observatory and data analysis techniques, *Journal of Atmospheric and Solar-Terrestrial Physics*, 65, doi:10.1016/S1364-6826(02)00297-3, pp.335-344, 2003.
- Mlynczak, M.G., and S. Solomon, A detailed evaluation of the heating efficiency in the middle atmosphere, *Journal of Geophysical Research*, 98 (D6), 10517-10541, 1993.
- Mlynczak, M.G., S. Solomon, and D.S. Zaras, An updated model for O₂(a¹Dg) concentrations in the mesosphere and lower thermosphere and implications for remote sensing of ozone at 1.27 mm, *Journal of Geophysical Research*, 98 (D10), 18639-18648, 1993.
- Mlynczak, M.G., C.J. Mertens, R.R. Garcia, and R.W. Portmann, A detailed evaluation of the stratospheric heat budget: 2, Global radiation balance and diabatic circulations, *Journal of Geophysical Research*, 104 (D6), 6039-6066, 1999.
- Moise, T., R.K. Talukdar, G.J. Frost, R.W. Fox, and Y. Rudich, The reactive uptake of NO₃ by liquid and frozen organics, *Journal of Geophysical Research*, 107 (D2), doi:10.129/2001JD000334, 2002.
- Montzka, S.A., M. Trainer, P.D. Goldan, W.C. Kuster, and F.C. Fehsenfeld, Isoprene and its oxidation products, methyl vinyl ketone and methacrolein, in the rural troposphere, *Journal of Geophysical Research*, 98 (D1), 1101-1111, 1993.
- Montzka, S.A., M. Trainer, W.M. Angevine, and F.C. Fehsenfeld, Measurements of 3-methyl furan, methyl vinyl ketone, and

- methacrolein at a rural forested site in the southeastern United States, *Journal of Geophysical Research*, 100, 11393-11401, 1995.
- Moody, J.L., J.C. Davenport, J.T. Merrill, S.J. Oltmans, D.D. Parrish, J.S. Holloway, H. Levy II, G.L. Forbes, M. Trainer, and M. Buhr, Meteorological mechanisms for transporting O₃ over the western north Atlantic Ocean: A case study for August 24-29, 1993, *Journal of Geophysical Research*, 101 (D22), 29213-29227, 1996.
- Moore, F.L., J.W. Elkins, E.A. Ray, G.S. Dutton, R.E. Dunn, D.W. Fahey, R.J. McLaughlin, T.L. Thompson, P.A. Romashkin, D.F. Hurst, and P.R. Wamsley, Balloonborne in situ gas chromatograph for measurements in the troposphere and stratosphere, *Journal of Geophysical Research*, *in press*, 2003.
- Morris, R.A., T.M. Miller, A.A. Viggiano, J.F. Paulson, S. Solomon, and G. Reid, Effects of electron and ion reactions on atmospheric lifetimes of fully fluorinated compounds, *Journal of Geophysical Research*, 100 (D1), 1287-1294, 1995.
- Morrison, G.C., and C.J. Howard, Selective detection of gas-phase aldehydes and ketones using protonated hydrazine, *International Journal of Mass Spectrometry and Ion Processes*, 210/211, 503-509, 2001.
- Mote, P.W., K.H. Rosenlof, J.R. Holton, R.S. Harwood, and J.W. Waters, Seasonal variations of water vapor in the tropical lower stratosphere, *Geophysical Research Letters*, 22 (9), 1093-1096, 1995.
- Mote, P.W., K.H. Rosenlof, M.E. McIntyre, E.S. Carr, J.C. Gille, J.R. Holton, J.S. Kinnersley, H.C. Pumphrey, J.M. Russell III, and J.W. Waters, An atmospheric tape recorder: The imprint of tropical tropopause temperatures on stratospheric water vapor, *Journal of Geophysical Research*, 101 (D2), 3989-4006, 1996.
- Mount, G., and J. Harder, Measurement of tropospheric trace gases at Fritz Peak Observatory, Colorado, by long-path absorption: OH and ancillary gases, *Journal of the Atmospheric Sciences*, 52 (19), 3342-3353, 1995.
- Mount, G.H., F.L. Eisele, D.J. Tanner, J.W. Brault, P.V. Johnston, J.W. Harder, E.J. Williams, A. Fried, and R. Shetter, An intercomparison of spectroscopic laser long-path and ion-assisted in situ measurements of hydroxyl concentration during the Tropospheric OH Photochemistry Experiment, fall 1993, *Journal of Geophysical Research*, 102 (D5), 6437-6455, 1997.
- Mount, G., J. Brault, P. Johnston, E. Marovich, R. Jakoubek, C. Volpe, J. Harder, and J. Olson, Measurement of tropospheric OH by long path laser absorption at Fritz Peak Observatory, Colorado during the OH Photochemistry Experiment, fall 1993, *Journal of Geophysical Research*, 102, 6393-6413, 1997.
- Mount, G.H., and E.J. Williams, An overview of the Tropospheric OH Photochemistry Experiment, Fritz Peak/Idaho Hill, Colorado, fall 1993, *Journal of Geophysical Research*, 102 (D5), 6171-6186, 1997.
- Müller, R., P.J. Crutzen, J.-U. Grooß, C. Brühl, J.M. Russell III, and A.F. Tuck, Chlorine activation and ozone depletion in the Arctic vortex: Observations by the Halogen Occultation Experiment on the Upper Atmosphere Research Satellite, *Journal of Geophysical Research*, 101, 12531-12554, 1996.
- Müller, R., J.-U. Grooß, D.S. McKenna, P.J. Crutzen, C. Brühl, J.M. Russell III, and A.F. Tuck, HALOE observations of the vertical structure of chemical ozone depletion in the Arctic vortex during winter and early spring 1996-1997, *Geophysical Research Letters*, 24, 2717-2720, 1997.
- Müller, R., P.J. Crutzen, J.-U. Grooß, C. Brühl, J.M. Russell III, H. Gernhardt, D.S. McKenna, and A.F. Tuck, Severe chemical ozone loss in the Arctic during the winter of 1995-96, *Nature*, 389, 709-712, 1997.
- Murphy, D.M., D.W. Fahey, M.H. Proffitt, S.C. Liu, K.R. Chan, C.S. Eubank, S.R. Kawa, and K.K. Kelly, Reactive nitrogen and its correlation with ozone in the lower stratosphere and upper troposphere, *Journal of Geophysical Research*, 98 (D5), 8751-8773, 1993.
- Murphy, D.M., and D.W. Fahey, An estimate of the flux of stratospheric reactive nitrogen and ozone into the troposphere, *Journal of Geophysical Research*, 99 (D3), 5325-5332, 1994.
- Murphy, D.M., and A.R. Ravishankara, Temperature averages and rates of stratospheric reactions, *Geophysical Research Letters*, 21 (23), 2471-2474, 1994.
- Murphy, D.M., and D.S. Thomson, Laser ionization mass spectroscopy of single aerosol particles, *Aerosol Science and Technology*, 22, 237-249, 1995.
- Murphy, D.M., and B.L. Gary, Mesoscale temperature fluctuations and polar stratospheric clouds, *Journal of the Atmospheric Sciences*, 52 (10), 1753-1760, 1995.
- Murphy, D.M., D.S. Thomson, M. Kaluzhny, J.J. Marti, and R.J. Weber, Aerosol characteristics at Idaho Hill during the OH Photochemistry Experiment, *Journal of Geophysical Research*, 102 (D5), 6325-6330, 1997.
- Murphy, D.M., D.S. Thomson, and A.M. Middlebrook, Bromine, iodine, and chlorine in single aerosol particles at Cape Grim, *Geophysical Research Letters*, 24 (24), 3197-3200, 1997.
- Murphy, D.M., and D.S. Thomson, Chemical composition of single aerosol particles at Idaho Hill: Negative ion measurements,

- Journal of Geophysical Research*, 102 (D5), 6353-6368, 1997.
- Murphy, D.M., and D.S. Thomson, Chemical composition of single aerosol particles at Idaho Hill: Positive ion measurements, *Journal of Geophysical Research*, 102 (D5), 6341-6352, 1997.
- Murphy, D.M., D.S. Thomson, and M.J. Mahoney, In situ measurements of organics, meteoritic material, mercury, and other elements in aerosols at 5 to 19 kilometers, *Science*, 282, 1664-1669, 1998.
- Murphy, D.M., D.S. Thomson, A.M. Middlebrook, and M.E. Schein, In situ single-particle characterization at Cape Grim, *Journal of Geophysical Research*, 103 (D13), 16485-16491, 1998.
- Murphy, D.M., J.R. Anderson, P.K. Quinn, L.M. McInnes, F.J. Brechtel, S.M. Kreidenwies, A.M. Middlebrook, M. Pósfai, D.S. Thomson, and P.R. Buseck, Influence of sea salt on aerosol radiative properties in the Southern Ocean marine boundary layer, *Nature*, 392, 62-65, 1998.
- Murphy, D.M., and M.E. Schein, Wind tunnel tests of a shrouded aircraft inlet, *Aerosol Science and Technology*, 28, 33-39, 1998.
- Murphy, D.M., and D.S. Thomson, Halogen ions and NO⁺ in the mass spectra of aerosols in the upper troposphere and lower stratosphere, *Geophysical Research Letters*, 27 (19), 3217-3220, 2000.
- Murphy, D.M., A.M. Middlebrook, and M. Warshawsky, Cluster analysis of data from the Particle Analysis by Laser Mass Spectrometry (PALMS) Instrument, *Aerosol Science and Technology*, 37, 382-391, doi:10.1080/02786820390125241, 2003.
- Murphy, D.M., Dehydration in cold clouds is enhanced by a transition from cubic to hexagonal ice, *Science*, submitted, 2003.
- Murphy, D.M., D.J. Cziczo, P.K. Hudson, M.E. Schein, and D.S. Thomson, Particle density inferred from simultaneous optical and aerodynamic diameters sorted by composition, *Journal of Aerosol Science*, in press, 2003.
- Murphy, D.M., A.M. Middlebrook, and M. Warshawsky, Regression tree cluster analysis of data from the Particle Analysis by Laser Mass Spectrometry (PALMS) instrument, *Aerosol Science and Technology*, 37, 382-391, 2003.
- Nastrom, G.D., W.L. Clark, K.S. Gage, T.E. Van Zandt, J.M. Warnock, R. Creasey, and P.M. Pauley, Case studies of the vertical velocity seen by the Flatland radar compared with indirectly computed values, *Journal of Atmospheric and Oceanic Technology*, 11 (1), 14-21, 1994.
- Nastrom, G.D., and T.E. Van Zandt, Mean vertical motions seen by radar wind profilers, *Journal of Applied Meteorology*, 33 (8), 984-995, 1994.
- Nastrom, G.D., and J.M. Warnock, Vertical motions estimated using data from a single station and a form of the adiabatic method, *Journal of Applied Meteorology*, 33 (1), 65-73, 1994.
- Nastrom, G.D., and T.E. Van Zandt, Biases due to gravity waves in wind profiler measurements of winds, *Journal of Applied Meteorology*, 35 (2), 243-257, 1996.
- Nastrom, G.D., W.L. Clark, T.E. Van Zandt, and J.M. Warnock, Seasonal and diurnal change in wind variability from Flatland VHF profiler observations, *Contributions to Atmospheric Physics*, 69, 5-12, 1996.
- Nastrom, G.D., T.E. Van Zandt, and J.M. Warnock, Vertical wavenumber spectra of wind and temperature from high-resolution balloon soundings over Illinois, *Journal of Geophysical Research*, 102 (D6), 6685-6701, 1997.
- Nastrom, G.D., and T.E. VanZandt, Seasonal variability of the observed vertical wave number spectra of wind and temperature and the effects of prewhitening, *Journal of Geophysical Research*, 106 (D13), 14369-14375, 2001.
- Neuman, J.A., L.G. Huey, T.B. Ryerson, and D.W. Fahey, Study of inlet materials for sampling atmospheric nitric acid, *Environmental Science and Technology*, 33, 1133-1136, 1999.
- Neuman, J.A., R.S. Gao, M.E. Schein, S.J. Ciciora, J.C. Holecek, T.L. Thompson, R.H. Winkler, R.J. McLaughlin, M.J. Northway, E.C. Richard, and D.W. Fahey, A fast-response chemical ionization mass spectrometer for in situ measurements of HNO₃ in the upper troposphere and lower stratosphere, *Reviews of Scientific Instruments*, 71 (10), 3886-3894, 2000.
- Neuman, J.A., R.S. Gao, D.W. Fahey, J.C. Holecek, B.A. Ridley, J.G. Walega, F.E. Grahek, E.C. Richard, C.T. McElroy, T.L. Thompson, J.W. Elkins, F.L. Moore, and E.A. Ray, In situ measurements of HNO₃, NO_y, NO, and O₃ in the lower stratosphere and upper troposphere, *Atmospheric Environment*, 35 (33), 5789-5797, 2001.
- Neuman, J.A., L.G. Huey, R.W. Dissly, F.C. Fehsenfeld, F. Flocke, J.C. Holocek, J.S. Holloway, G. Hübner, R. Jakoubek, D.K. Nicks, Jr., D.D. Parrish, T.B. Ryerson, D.T. Sueper, and A. Weinheimer, Fast-response airborne in situ measurements of HNO₃ during the Texas Air Quality Study, *Journal of Geophysical Research*, 2002 (107), D20, 2002.
- Neuman, J., T.B. Ryerson, L.G. Huey, R. Jakoubek, J.B. Nowak, C. Simons, and F.C. Fehsenfeld, Calibration and evaluation of nitric acid and ammonia permeation tubes by UV optical absorption, *Environmental Science and Technology*, 37 (13), 2975-2981, doi: 10.1021/es026422l, 2003.
- Neuman, J.A., J.B. Nowak, C.A. Brock, M. Trainer, F.C. Fehsenfeld, J.S. Holloway, G. Hübner, P.K. Hudson, D.M. Murphy, D.K.

- Nicks, Jr., D. Orsini, D.D. Parrish, T.B. Ryerson, D.T. Sueper, A. Sullivan, and R. Weber, Variability in ammonium nitrate formation and nitric acid depletion with altitude and location over California, *Journal of Geophysical Research*, 108 (D17), 4557, doi:10.1029/2003JD003616, 2003.
- Neuman, J.A., J.B. Nowak, C.A. Brock, M. Trainer, F.C. Fehsenfeld, J.S. Holloway, G. Hübler, P.K. Hudson, D.M. Murphy, D.K. Nicks, Jr., J.D. Orsini, D.D. Parrish, T.B. Ryerson, D.T. Sueper, A. Sullivan, and R. Weber, Vertical gradients and spatial variability in ammonium nitrate formation and nitric acid depletion over California, *Journal of Geophysical Research*, *in press*, 2003.
- Nevison, C.D., S. Solomon, and J.M. Russell III, Nighttime formation of N_2O_5 inferred from the Halogen Occultation Experiment sunset/sunrise NO_x ratios, *Journal of Geophysical Research*, 101 (D3), 6741-6748, 1996.
- Nevison, C.D., S. Solomon, R.R. Garcia, D.W. Fahey, E.R. Keim, M. Loewenstein, J.R. Podolske, R.S. Gao, R.C. Wamsley, S.G. Donnelly, and L.A. Del Negro, Influence of Antarctic denitrification on two-dimensional model $\text{NO}_y/\text{N}_2\text{O}$ correlations in the lower stratosphere, *Journal of Geophysical Research*, 102 (D11), 13183-13192, 1997.
- Nevison, C.D., S. Solomon, and R.R. Garcia, Model overestimates of NO_y in the upper stratosphere, *Geophysical Research Letters*, 24 (7), 803-806, 1997.
- Nevison, C.D., S. Solomon, and R.S. Gao, Buffering interactions in the modeled response of stratospheric O_3 to increased NO_x and HO_x , *Journal of Geophysical Research*, 104 (D3), 3741-3754, 1999.
- Nevison, C.D., E.R. Keim, S. Solomon, D.W. Rahey, J.W. Elkins, M. Loewenstein, and J.R. Podolske, Constraints on N_2O sinks inferred from observed tracer correlations in the lower stratosphere, *Global Biogeochemical Cycles*, 13 (3), 737-742, 1999.
- Newchurch, M.J., M. Allen, M.R. Gunson, R.J. Salawitch, G.B. Collins, K.H. Huston, M.M. Abbas, M.C. Abrams, A.Y. Chang, D.W. Fahey, R.S. Gao, F.W. Irion, M. Loewenstein, G.L. Manney, H.A. Michelsen, J.R. Podolske, C.P. Rinsland, and R. Zander, Stratospheric NO and NO_2 abundances from ATMOS solar-occultation measurements, *Geophysical Research Letters*, 23, 2373-2376, 1996.
- Newell, R.E., W. Hu, Z.-X. Wu, Y. Zhu, H. Akimoto, B.E. Anderson, E.V. Browell, G.L. Gregory, G.W. Sachse, M.C. Shipham, A.S. Bachmeier, A.R. Bandy, D.C. Thornton, D.R. Blake, F.S. Rowland, J.D. Bradshaw, J.H. Crawford, D.D. Davis, S.T. Sandholm, W. Brockett, L. DeGreef, D. Lewis, D. McCormick, E. Monita, J.E. Collins, Jr., B.G. Heikes, J.T. Merrill, K.K. Kelly, S.C. Liu, Y. Kondo, M. Koike, C.-M. Liu, F. Sakamaki, H.B. Singh, J.E. Dibb, and R.W. Talbot, Atmospheric sampling of Supertyphoon Mireille with NASA DC-8 aircraft on September 27, 1991, during PEM-West A, *Journal of Geophysical Research*, 101 (D1), 1853-1871, 1996.
- Newell, R.E., Y. Zhu, E.V. Browell, S. Ismail, W.G. Read, J.W. Waters, K.K. Kelly, and S.C. Liu, Upper tropospheric water vapor and cirrus: Comparison of DC-8 observations, preliminary UARS microwave limb sounder measurements and meteorological analyses, *Journal of Geophysical Research*, 101 (D1), 1931-1941, 1996.
- Newell, R.E., Z.-X. Wu, Y. Zhu, W. Hu, E.V. Browell, G.L. Gregory, G.W. Sachse, J.E. Collins, K.K. Kelly, and S.C. Liu, Vertical fine-scale atmospheric structure measured from NASA DC-8 during PEM-West A, *Journal of Geophysical Research*, 101 (D1), 1943-1960, 1996.
- Newell, R.E., E.V. Browell, D.D. Davis, and S.C. Liu, Western Pacific tropospheric ozone and potential vorticity: Implications for Asian pollution, *Geophysical Research Letters*, 24 (22), 2733-2736, 1997.
- Newman, P., L.R. Lait, M. Schoeberl, E.R. Nash, K.K. Kelly, D.W. Fahey, R. Nagatani, D. Toohey, L. Avallone, and J. Anderson, Stratospheric meteorological conditions in the Arctic polar vortex, 1991 to 1992, *Science*, 261, 1143-1146, 1993.
- Newman, P., L.R. Lait, M.R. Schoeberl, M. Seablom, L. Coy, R. Rood, R. Swinbank, M.H. Proffitt, M. Loewenstein, J.R. Podolske, J.W. Elkins, C.R. Webster, R.D. May, D.W. Fahey, G.S. Dutton, and K.R. Chan, Measurements of polar vortex air in the midlatitudes, *Journal of Geophysical Research*, 101, 12879-12891, 1996.
- Newman, P.A., D.W. Fahey, W.H. Brune, M.J. Kurylo, and S.R. Kawa, Preface-Photochemistry of Ozone Loss in the Arctic Region in Summer (POLARIS), *Journal of Geophysical Research*, 104 (D21 POLARIS), 26481-26495, 1999.
- Newman, P.A., J.C. Wilson, M.N. Ross, C.A. Brock, P.J. Sheridan, M.R. Schoeberl, L.R. Lait, T.P. Bui, M. Loewenstein, and J.R. Podolske, Chance encounter with a stratospheric kerosene rocket plume from Russia over California, *Geophysical Research Letters*, 28, 959-962, 2001.
- Nicks, D.K., Jr., J.S. Holloway, T.B. Ryerson, R.W. Dally, D.D. Parrish, G.J. Frost, M. Trainer, S.G. Donnelly, S. Schauffler, E.L. Atlas, G. Hübler, D.T. Sueper, and F.C. Fehsenfeld, Fossil-fueled power plants as a source of atmospheric carbon monoxide, *Journal of Environmental Monitoring*, 5, 35-39, doi: 10.1039/b201486f, 2003.
- Northway, M.J., R.S. Gao, P.J. Popp, J.C. Holecek, D.W. Fahey, K.S. Carslaw, M.A. Tolbert, L.R. Lait, S. Dhaniyalal, R.C. Flagan, P.O. Wennberg, M.J. Mahoney, R.L. Herman, G.C. Toon, and T.P. Bui, An analysis of large HNO_3 -containing particles sampled in the Arctic stratosphere during the winter of 1999/2000, *Journal of Geophysical Research*, 107 (D20), 8298, doi:10.1029/2001JD001079, 2002.

- Novelli, P.C., V.S. Connors, H.G. Reichl Jr., B.E. Anderson, C.A.M. Brenninkmeijer, E.G. Brunke, B.G. Doddridge, V.W.J.H. Kirchhoff, K.S. Lam, K.A. Masarie, T. Matsuo, D.D. Parrish, H.E. Scheel, and L.P. Steele, An internally consistent set of globally distributed atmospheric carbon monoxide mixing ratios developed using results from an intercomparison of measurements, *Journal of Geophysical Research*, 103 (D15), 19285-19293, 1998.
- Olson, J.A., K. Baumann, C.J. Volpe, J.W. Harder, E.J. Williams, and G.H. Mount, Meteorological overview of the 1993 OH Photochemistry Experiment, *Journal of Geophysical Research*, 102 (D5), 6187-6197, 1997.
- Oltmans, S.J., H. Levy II, J.M. Harris, J.T. Merrill, J.L. Moody, J.A. Lathrop, E. Cuevas, M. Trainer, M.S. O'Neill, J.M. Prospero, H. Vömel, and B.J. Johnson, Summer and spring ozone profiles over the North Atlantic from ozonesonde measurements, *Journal of Geophysical Research*, 101, 29179-29200, 1996.
- Oltmans, S.J., H. Vömel, D.J. Hofmann, K.H. Rosenlof, and D. Kley, The increase in stratospheric water vapor from balloonborne, frostpoint hygrometer measurements at Washington, D.C., and Boulder, Colorado, *Geophysical Research Letters*, 27 (21), 3453-3456, 2000.
- Orlando, J.J., and J.B. Burkholder, Gas-phase UV/visible absorption spectra of HOBr and Br₂O, *Journal of Physical Chemistry*, 99 (4), 1143-1150, 1995.
- Orlando, J.J., and J.B. Burkholder, Identification of BrONO as the major product in the gas-phase reaction of Br with NO₂, *Journal of Physical Chemistry*, 104, 2048-2053, 2000.
- Orlando, J.J., G.S. Tyndall, S.B. Bertman, W. Chen, and J.B. Burkholder, Rate coefficient for the reaction of OH with CH₂ = C(CH₃)C(O)NO₂(MPAN), *Atmospheric Environment*, submitted, 2001.
- Ortigoso, J., R. Escribano, J.B. Burkholder, and W.J. Lafferty, Infrared spectrum of OCIO in the 2000 cm⁻¹ region: The 2u₁ and u₁ + u₃ bands, *Journal of Molecular Spectroscopy*, 158, 347-356, 1993.
- Osterman, G.B., B. Sen, G.C. Toon, R.J. Salawitch, J.J. Margitan, J.-F. Blavier, D.W. Fahey, and R.S. Gao, Partitioning of NO_y species in the summer Arctic stratosphere, *Geophysical Research Letters*, 26 (8), 1157-1160, 1999.
- Paluch, I.R., D.H. Lenschow, S. Siems, S. McKeen, G.L. Kok, and R.D. Schillawski, Evolution of the subtropical marine boundary layer: Comparison of soundings over the eastern Pacific from FIRE and HaRP, *Journal of the Atmospheric Sciences*, 51 (11), 1465-1479, 1994.
- Pan, L., S. Solomon, W. Randel, J.-F. Lamarque, P. Hess, J. Gille, E.-W. Chiou, and M.P. McCormick, Hemispheric asymmetries and seasonal variations of the lowermost stratospheric water vapor and ozone derived from SAGE II data, *Journal of Geophysical Research*, 102 (D23), 28177-28184, 1997.
- Parkhurst, W.J., R.L. Tanner, F.P. Weatherford, R.J. Valente, and J.F. Meagher, Historic PM_{2.5}/PM₁₀ Concentrations in the southeastern United States-Potential implications of the revised particulate matter standard, *Journal of the Air & Waste Management Association*, 49, 1060-1067, 1999.
- Parrish, D.D., J.S. Holloway, M. Trainer, P.C. Murphy, G.L. Forbes, and F.C. Fehsenfeld, Export of North American ozone pollution to the North Atlantic Ocean, *Science*, 259, 1436-1439, 1993.
- Parrish, D.D., C.J. Hahn, E.J. Williams, R.B. Norton, F.C. Fehsenfeld, H.B. Singh, J.D. Shetter, B.W. Gandrud, and B.A. Ridley, Reply, *Journal of Geophysical Research*, 98 (D8), 14995-14997, 1993.
- Parrish, D.D., M.P. Buhr, M. Trainer, R.B. Norton, J.P. Shimshock, F.C. Fehsenfeld, K.G. Anlauf, J.W. Bottenheim, Y.Z. Tang, H.A. Wiebe, J.M. Roberts, R.L. Tanner, L. Newman, V.C. Bowersox, K.J. Olszyna, E.M. Bailey, M.O. Rodgers, T. Wang, H. Berresheim, U.K. Roychowdhury, and K.L. Demerjian, The total reactive oxidized nitrogen levels and the partitioning between the individual species at six rural sites in eastern North America, *Journal of Geophysical Research*, 98 (D2), 2927-2939, 1993.
- Parrish, D.D., J.S. Holloway, and F.C. Fehsenfeld, Routine, continuous measurement of carbon monoxide with parts per billion precision, *Environmental Science and Technology*, 28 (9), 1615-1618, 1994.
- Parrish, D.D., M. Trainer, V. Young, P.D. Goldan, W.C. Kuster, B.T. Jobson, F.C. Fehsenfeld, W.A. Lonneman, R.D. Zika, C.T. Farmer, D.D. Riemer, and M.O. Rodgers, Internal consistency tests for evaluation of measurements of anthropogenic hydrocarbons in the troposphere, *Journal of Geophysical Research*, 103 (D17), 22339-22359, 1998.
- Parrish, D.D., M. Trainer, J.S. Holloway, J.E. Yee, M.S. Warshawsky, F.C. Fehsenfeld, G.L. Forbes, and J.L. Moody, Relationships between ozone and carbon monoxide at surface sites in the North Atlantic region, *Journal of Geophysical Research*, 103 (D11), 13357-13376, 1998.
- Parrish, D.D., T.B. Ryerson, J.S. Holloway, M. Trainer, and F.C. Fehsenfeld, New directions: Does pollution increase or decrease tropospheric ozone in Winter-Spring?, *Atmospheric Environment*, 33, 5147-5149, 1999.
- Parrish, D.D., and F.C. Fehsenfeld, Methods for gas-phase measurements of ozone, ozone precursors and aerosol precursors, *Atmospheric Environment*, 34, 1921-1957, 2000.

- Parrish, D.D., J.S. Holloway, R. Jakoubek, M. Trainer, T.B. Ryerson, G. Hübler, and F.C. Fehsenfeld, Mixing of anthropogenic pollution with stratospheric ozone: A case study from the North Atlantic wintertime troposphere, *Journal of Geophysical Research*, 105 (D19), 24363-24374, 2000.
- Parrish, D.D., M. Trainer, D. Hereid, E.J. Williams, K.J. Olszyna, R.A. Harley, J.F. Meagher, and F.C. Fehsenfeld, Decadal change in carbon monoxide to nitrogen oxide ratio in U.S. vehicular emissions, *Journal of Geophysical Research*, 107 (D12), 4140, doi:10.1029/2001JD000720, 2002.
- Parsons, D., W. Dabberdt, H. Cole, T. Hock, C. Martin, A.L. Barrett, E. Miller, M. Spowart, M. Howard, W. Ecklund, D.A. Carter, K.S. Gage, and J. Wilson, The integrated sounding system: Description and preliminary observations from TOGA COARE, *Bulletin of the American Meteorological Society*, 75, 553-567, 1994.
- Pauley, P.M., R.L. Creasey, W.L. Clark, and G.D. Nastrom, Comparisons of horizontal winds measured by opposing beams with the Flatland ST radar and between Flatland measurements and NMC analyses, *Journal of Atmospheric and Oceanic Technology*, 11 (2), 256-274, 1994.
- Penkett, S.A., A. Volz-Thomas, D.D. Parrish, R.E. Honrath, and F.C. Fehsenfeld, North Atlantic Regional Experiment (NARE II): Preface, *Journal of Geophysical Research*, 103 (D11), 13353-13355, 1998.
- Perliski, L.M., and S. Solomon, On the evaluation of air mass factors for atmospheric near-ultraviolet and visible absorption spectroscopy, *Journal of Geophysical Research*, 98 (D6), 10363-10374, 1993.
- Peters, G., and W.M. Angevine, On the correction of RASS-temperature errors due to turbulence, *Contributions to Atmospheric Physics*, 69 (1), 81-96, 1996.
- Peterson, M.C., R.E. Honrath, D.D. Parrish, and S.J. Oltmans, Measurements of nitrogen oxides and a simple model of NO_y fate in the remote North Atlantic marine atmosphere, *Journal of Geophysical Research*, 103 (D11), 13489-13503, 1998.
- Petron, G., C. Granier, B. Khattatov, J.F. Lamarque, V. Yudin, J.F. Muller, and J. Gille, Inverse modeling of carbon monoxide surface emissions using CMDL network observations, *Journal of Geophysical Research*, in press, 2002.
- Pfeilsticker, K., and O. Funk, Irrwege des Sonnenlichts, *Physik in unserer Zeit: Atmosphärenphysik*, 31, 152-158, 2000.
- Pfister, L., K.R. Chan, T.P. Bui, S. Bowen, M. Legg, B. Gary, K. Kelly, M. Proffitt, and W. Starr, Gravity waves generated by a tropical cyclone during the STEP Tropical Field Program: A case study, *Journal of Geophysical Research*, 98 (D5), 8611-8638, 1993.
- Pierce, R.B., W.L. Grose, J.M. Russell III, and A.F. Tuck, Evolution of Southern Hemisphere spring air masses observed by HALOE, *Geophysical Research Letters*, 21, 213-216, 1994.
- Pierce, R.B., W.L. Grose, J.M. Russell III, A.F. Tuck, R. Swinbank, and A. O'Neill, Spring dehydration in the Antarctic stratospheric vortex observed by HALOE, *Journal of the Atmospheric Sciences*, 51 (20), 2931-2941, 1994.
- Pierce, R.B., J.A. Al-Saadi, T.D. Fairlie, M. Natarajan, V.L. Harvey, W.L. Grose, J.M. Russell III, R.M. Bevilacqua, S.D. Eckerman, D.W. Fahey, P.J. Popp, E.C. Richard, R.M. Stimpfle, G.C. Toon, C.R. Webster, and J.W. Elkins, Large-scale chemical evolution of the Arctic vortex during the 1999/2000 winter: HALOE/POAM III Lagrangian photochemical modeling for the SAGE III—Ozone Loss and Validation Experiment (SOLVE) campaign, *Journal of Geophysical Research*, 108 (D5), 8317, doi:10.1029/2001JD001063, 2003.
- Podolske, J.R., M. Loewenstein, A. Weaver, S.E. Strahan, and K.R. Chan, Northern Hemisphere nitrous oxide morphology during the 1989 AASE and the 1991-1992 AASE II Campaigns, *Geophysical Research Letters*, 20 (22), 2535-2538, 1993.
- Popp, P.J., M.J. Northway, J.C. Holecek, R.S. Gao, D.W. Fahey, J.W. Elkins, D.F. Hurst, P.A. Romashkin, G.C. Toon, B. Sen, S.M. Schauffler, R.J. Salawitch, C.R. Webster, R.L. Herman, H. Jost, T.P. Bui, P.A. Newman, and L.R. Lait, Severe and extensive denitrification in the 1999-2000 Arctic winter stratosphere, *Geophysical Research Letters*, 28 (15), 2875-2878, 2001.
- Popp, P.J., B.A. Ridley, J.A. Neuman, L.M. Avallone, D.W. Toohey, P.F. Zittel, O. Schmid, R.L. Herman, R.S. Gao, M.J. Northway, J.C. Holecek, D.W. Fahey, T.L. Thompson, K.K. Kelly, J.G. Walega, F.E. Grahek, J.C. Wilson, M.N. Ross, and M.Y. Danilin, The emission and chemistry of reactive nitrogen species in the plume of an Athena II solid-fuel rocket motor, *Geophysical Research Letters*, 29 (18), 1887, doi:10.1029/2002GL015197, 2002.
- Portmann, R.W., G.E. Thomas, S. Solomon, and R.R. Garcia, The importance of dynamical feedbacks on doubled CO₂-induced changes in the thermal structure of the mesosphere, *Geophysical Research Letters*, 22 (13), 1733-1736, 1995.
- Portmann, D.A., and D.S. Gutzler, Explosive volcanic eruptions, the El Niño/Southern oscillation, and U.S. climate variability, *Journal of Climate*, 9, 17-33, 1996.
- Portmann, R.W., S. Solomon, R.R. Garcia, L.W. Thomason, L.R. Poole, and M.P. McCormick, Role of aerosol variations in anthropogenic ozone depletion in the polar regions, *Journal of Geophysical Research*, 101 (D17), 22991-23006, 1996.
- Portmann, R.W., S. Solomon, J. Fishman, J.R. Olson, J.T. Kiehl, and B. Briegleb, Radiative forcing of the Earth's climate system due to tropical tropospheric ozone production, *Journal of Geophysical Research*, 102 (D8), 9409-9417, 1997.

- Portmann, R.W., S.S. Brown, T. Gierczak, R.K. Talukdar, J.B. Burkholder, and A.R. Ravishankara, Role of nitrogen oxides in the lower stratosphere: A reevaluation based on laboratory studies, *Geophysical Research Letters*, 26 (15), 2387-2390, 1999.
- Portmann, R.W., S. Solomon, R.W. Sanders, J.S. Daniel, and E.G. Dutton, Cloud modulation of zenith sky oxygen photon path lengths over Boulder, Colorado: Measurement versus model, *Journal of Geophysical Research*, 106 (D1), 1139-1155, 2001.
- Post, M.J., C.W. Fairall, J.B. Snider, Y. Han, A.B. White, W.L. Ecklund, K.M. Weickmann, P.K. Quinn, D.I. Cooper, S.M. Sekelsky, R.E. McIntosh, P. Minnett, and R.O. Knuteson, The combined sensor program: An air-sea science mission in the central and western Pacific Ocean, *Bulletin of the American Meteorological Society*, 78 (12), 2797-2815, 1997.
- Proffitt, M.H., K. Aikin, J.J. Margitan, M. Loewenstein, J.R. Podolske, A. Weaver, K.R. Chan, H. Fast, and J.W. Elkins, Ozone loss inside the northern polar vortex during the 1991-1992 winter, *Science*, 261, 1150-1154, 1993.
- Proffitt, M.H., and A.O. Langford, Profiling of ozone in the free troposphere by the lidar technique, *Reviews of Laser Engineering*, 23 (2), 104-107, 1995.
- Proffitt, M.H., and A.O. Langford, Ground-based differential absorption lidar system for day or night measurements of ozone throughout the free troposphere, *Applied Optics*, 36 (12), 2568-2585, 1997.
- Proffitt, M.H., K. Aikin, A.F. Tuck, J.J. Margitan, C.R. Webster, G.C. Toon, and J.W. Elkins, Seasonally averaged ozone and nitrous oxide in the Northern Hemisphere lower stratosphere, *Journal of Geophysical Research*, 108 (D3), 4110, doi: 10.1029/2002JD002657, 2003.
- Rajopadhyaya, D.K., P.T. May, R.C. Cifelli, S.K. Avery, C.R. Williams, W.L. Ecklund, and K.S. Gage, The effect of vertical air motions on rain rates and median volume diameter determined from combined UHF and VHF wind profiler measurements and comparisons with rain gauge measurements, *Journal of Atmospheric and Oceanic Technology*, 15, 1306-1319, 1998.
- Ravishankara, A.R., S. Solomon, A.A. Turnipseed, and R.F. Warren, Atmospheric lifetimes of long-lived halogenated species, *Science*, 259, 194-199, 1993.
- Ravishankara, A.R., and E.R. Lovejoy, Atmospheric lifetime, its application and its determination: CFC-substitutes as a case study, *Journal of the Chemical Society, Faraday Transactions*, 90 (15), 2159-2169, 1994.
- Ravishankara, A.R., A.A. Turnipseed, N.R. Jensen, S. Barone, M. Mills, C.J. Howard, and S. Solomon, Do hydrofluorocarbons destroy stratospheric ozone?, *Science*, 263, 71-75, 1994.
- Ravishankara, A.R., and D.L. Albritton, Methyl chloroform and the atmosphere, *Science*, 269, 183-184, 1995.
- Ravishankara, A.R., and D.R. Hanson, Difference in the reactivity of Type I polar stratospheric clouds depending on their phase, *Journal of Geophysical Research*, 101 (D2), 3885-3890, 1996.
- Ravishankara, A.R., Heterogeneous and multiphase chemistry in the troposphere, *Science*, 276, 1058-1065, 1997.
- Ravishankara, A.R., Y. Rudich, R. Talukdar, and S.B. Barone, Oxidation of atmospheric reduced sulphur compounds: Perspective from laboratory studies, *Philosophical Transactions of the Royal Society of London B*, 352, 171-182, 1997.
- Ravishankara, A.R., G. Hancock, M. Kawasaki, and Y. Matsumi, Photochemistry of ozone: Surprises and recent lessons, *Science*, 280, 60-61, 1998.
- Ravishankara, A.R., and C.A. Longfellow, Reactions on tropospheric condensed matter: Plenary Lecture, *Physical Chemistry Chemical Physics*, 1, 5433-5441, 1999.
- Ravishankara, A.R., E.J. Dunlea, M.A. Blitz, T.J. Dillon, D.E. Heard, M.J. Pilling, R.S. Strelkowski, J.M. Nicovich, and P.H. Wine, Redetermination of the rate coefficient for the reaction of O(¹D) with N₂, *Geophysical Research Letters*, 29 (15), doi:10.1029/2002GL014850, 2002.
- Ray, E.A., F.L. Moore, J.W. Elkins, G.S. Dutton, D.W. Fahey, H. Vömel, S.J. Oltmans, and K.H. Rosenlof, Transport into the Northern Hemisphere lowermost stratosphere revealed by in situ tracer measurements, *Journal of Geophysical Research*, 104 (D21 POLARIS), 26565-26580, 1999.
- Ray, E.A., F.L. Moore, J.W. Elkins, D.F. Hurst, P.A. Romashkin, G.S. Dutton, and D.W. Fahey, Descent and mixing in the 1999-2000 northern polar vortex inferred from in situ tracer measurements, *Journal of Geophysical Research*, 107 (D20), 8285, doi:10.1029/2001JD000961, 2002.
- Ray, E.A., K.H. Rosenlof, E.C. Richard, D.D. Parrish, and R. Jakoubek, Seasonal distributions of ozone in the region of the subtropical jet: An analysis of in situ aircraft measurements, *Journal of Geophysical Research*, submitted, doi:2003JD004143, 2003.
- Reid, S.J., G. Vaughan, and E. Kyro, Occurrence of ozone laminae near the boundary of the stratospheric polar vortex, *Journal of Geophysical Research*, 98, 8883-8890, 1993.
- Reid, S.J., G. Vaughan, N.J. Mitchell, J.T. Prichard, H.J. Smit, T.S. Jorgensen, C. Varotsos, and H. de Bacher, Distribution of ozone laminae during EASOE and the possible influence of inertia gravity waves, *Geophysical Research Letters*, 21, 1479-1482,

1994.

- Reid, G.C., Seasonal and interannual temperature variations in the tropical stratosphere, *Journal of Geophysical Research*, 99 (D9), 18923-18932, 1994.
- Reid, G.C., The sun-climate question: Is there a real connection?, *Reviews of Geophysics Supplement* (July), 535-538, 1995.
- Reid, S.J., and G. Vaughan, Accuracy of ozonesonde measurements in the troposphere, *Journal of Atmospheric Chemistry*, 25, 215-226, 1996.
- Reid, G.C., Comment on the solar flare debate, *EOS, Transactions, American Geophysical Union*, 77 (8), 78, 1996.
- Reid, G.C., and K.S. Gage, The tropical tropopause over the western Pacific: Wave driving, convection, and the annual cycle, *Journal of Geophysical Research*, 101 (D16), 21233-21241, 1996.
- Reid, G.C., The nucleation and growth of ice particles in the upper mesosphere, *Advances in Space Research*, 20, 1285-1291, 1997.
- Reid, G.C., On the influence of electrostatic charging on the coagulation of dust and ice particles in the upper mesosphere, *Geophysical Research Letters*, 24, 1095-1098, 1997.
- Reid, G.C., Solar forcing of global climate change since the mid-17th century, *Climatic Change*, 37, 391-405, 1997.
- Reid, S.J., M. Rex, P. Von der Gathen, I. Floisand, F. Stordal, G.D. Carver, A. Beck, E. Reimer, R. Kruger-Carstensen, L.L. DeHaan, G. Braathen, V. Dorokhov, H. Fast, E. Kyro, M. Gil, Z. Litynska, M. Molyneux, G. Murphy, F. O'Conner, F. Ravagnani, C. Varotsos, J. Wenger, and C. Zerefos, A study of ozone laminae using diabatic trajectories, contour advection and photochemical trajectory model simulations, *Journal of Atmospheric Chemistry*, 30, 187-207, 1998.
- Reid, G.C., Solar variability and its implications for the human environment, *Journal of Atmospheric and Solar-Terrestrial Physics*, 61, 3-14, 1999.
- Reid, S.J., A.F. Tuck, and G.N. Kiladis, On the changing abundance of ozone minima at northern midlatitudes, *Journal of Geophysical Research*, 105 (D10), 12169-12180, 2000.
- Reid, G.C., Solar variability and the Earth's climate: Introduction and overview, *Space Science Reviews*, 94, 1-11, 2000.
- Reid, S.J., A.F. Tuck, and G.N. Kiladis, Decreasing midlatitude ozone: The role of the North Atlantic oscillation, *Journal of Geophysical Research*, submitted, 2001.
- Revell, M.J., J.W. Kidson, and G.N. Kiladis, Interpreting low-frequency modes of Southern Hemisphere atmospheric variability as the rotational response to divergent forcing, *Monthly Weather Review*, 129, 2416-2425, 2001.
- Rex, M., P. von der Gathen, N.R.P. Harris, D. Lucic, B.M. Knudsen, G.O. Braathen, S.J. Reid, H. De Backer, H. Claude, R. Fabian, H. Fast, M. Gil, E. Kyrö, I.S. Mikkelsen, M. Rummukainen, H.G. Smit, J. Stähelin, C. Varotsos, and I. Zaitcev, In situ measurements of stratospheric ozone depletion rates in the Arctic winter 1991-92: A Lagrangian approach, *Journal of Geophysical Research*, 103 (D5), 5843-5853, 1998.
- Rex, M., P. von der Gathen, G.O. Braathen, N.R.P. Harris, E. Reimer, A. Beck, R. Alfier, R. Krüger-Carstensen, M. Chipperfield, H. De Backer, D. Balis, F. O'Connor, H. Dier, V. Dorokhov, H. Fast, A. Gamma, M. Gil, E. Kyrö, Z. Litynska, I.S. Mikkelsen, M. Molyneux, G. Murphy, S.J. Reid, M. Rummukainen, and C. Zerefos, Chemical ozone loss in the Arctic winter 1994/95 as determined by the Match Technique, *Journal of Atmospheric Chemistry*, 32, 35-59, 1999.
- Rex, M., R.J. Salawitch, G.C. Toon, B. Sen, J.J. Margitan, G.B. Osterman, J.-F. Blavier, R.S. Gao, S. Donnelly, E. Keim, J. Newman, D.W. Fahey, C.R. Webster, D.C. Scott, R.L. Herman, R.P. May, E.J. Moyer, M.R. Gunson, F.W. Irion, A.Y. Chang, C.P. Rinsland, and T.P. Bui, Subsidence, mixing and denitrification of Arctic polar vortex air measured during POLARIS, *Journal of Geophysical Research*, 104, 26565-26580, 1999.
- Richard, E.C., K.C. Aikin, A.E. Andrews, B.C. Daube Jr., C. Gerbig, S.C. Wofsy, P.A. Romashkin, D.F. Hurst, E.A. Ray, F.L. Moore, J.W. Elkins, T. Deshler, and G.C. Toon, Severe chemical ozone loss inside the Arctic Polar Vortex during winter 1999-2000 inferred from *in situ* airborne measurements, *Geophysical Research Letters*, 2001.
- Richard, E.C., K.K. Kelly, R.H. Winkler, R. Wilson, T.L. Thompson, R.J. McLaughlin, A.L. Schmeltekopf, and A.F. Tuck, A fast-response near-infrared tunable diode laser absorption spectrometer for *in situ* measurements of CH₄ in the upper troposphere and lower stratosphere, *Applied Physics Letters*, in press, 2002.
- Riddle, A.C., W.M. Angevine, W.L. Ecklund, E.R. Miller, D.B. Parsons, D.A. Carter, and K.S. Gage, In situ and remotely sensed horizontal winds and temperature intercomparisons obtained using Integrated Sounding Systems during TOGA COARE, *Contributions to Atmospheric Physics*, 69, 49-61, 1996.
- Ridley, B.A., J. Walega, G. Hübner, D. Montzka, E. Atlas, D. Hauglustaine, F. Grahek, J. Lind, T. Campos, R.B. Norton, J. Greenberg, S. Schauffler, S. Oltmans, and S. Whittlestone, Measurements of NO_x and PAN and estimates of O₃ production over the seasons during Mauna Loa Observatory Photochemistry Experiment 2, *Journal of Geophysical Research*, 103 (D7), 8323-8339, 1998.

- Ridley, B.A., J.G. Walega, J.-F. Lamarque, F.E. Grahek, M. Trainer, G. Hübler, X. Lin, and F.C. Fehsenfeld, Measurements of reactive nitrogen and ozone to 5-km altitude in June 1990 over the southeastern United States, *Journal of Geophysical Research*, 103 (D7), 8369-8388, 1998.
- Rinsland, C.P., R.J. Salawitch, M.R. Gunson, S. Solomon, R. Zander, E. Madieu, A. Goldman, M.J. Newchurch, F.W. Irion, and A.Y. Chang, Polar stratospheric descent of NO_y and CO and Arctic denitrification during winter 1992-1993, *Journal of Geophysical Research*, 104 (D1), 1847-1861, 1999.
- Roberts, J.M., S.B. Bertman, P.B. Shepson, T.E. Kleindienst, and D.F. Smith, Comment on peroxyisobutyryl nitrate, *Environmental Science and Technology*, 29, 286, 1995.
- Roberts, J., R. Tanner, L. Newman, V. Bowersox, J. Bottenheim, K. Anlauf, K. Brice, D. Parrish, F. Fehsenfeld, M. Buhr, J. Meagher, and E. Bailey, Relationships between PAN and ozone at sites in eastern North America, *Journal of Geophysical Research*, 100 (D11), 22821-22830, 1995.
- Roberts, J.M., D.D. Parrish, R.B. Norton, S. Bertman, B., J.S. Holloway, M. Trainer, F.C. Fehsenfeld, M.A. Carroll, G.M. Albercook, T. Wang, and G. Forbes, Episodic removal of NO_y species from the marine boundary-layer over the North Atlantic, *Journal of Geophysical Research*, 101 (D22), 28947-28960, 1996.
- Roberts, J.M., S.B. Bertman, D.D. Parrish, F.C. Fehsenfeld, B.T. Jobson, and H. Niki, Measurement of alkyl nitrates at Chebogue Point, Nova Scotia during the 1993 North Atlantic Regional Experiment (NARE) intensive, *Journal of Geophysical Research*, 103 (D11), 13569-13580, 1998.
- Roberts, J.M., S.B. Bertman, T. Jobson, H. Niki, and R. Tanner, Measurement of total nonmethane organic carbon (Cy): Development and application at Chebogue Point, Nova Scotia, during the 1993 North Atlantic Regional Experiment campaign, *Journal of Geophysical Research*, 103 (D11), 13581-13592, 1998.
- Roberts, J.M., J. Williams, K. Baumann, M.P. Buhr, P.D. Goldan, J. Holloway, G. Hübler, W.C. Kuster, S.A. McKeen, T.B. Ryerson, M. Trainer, E.J. Williams, F.C. Fehsenfeld, S.B. Bertman, G. Nouaime, C. Seaver, G. Grodzinsky, M. Rodgers, and V.L. Young, Measurements of PAN, PPN, and MPAN made during the 1994 and 1995 Nashville Intensives of the Southern Oxidants Study: Implications for regional ozone production from biogenic hydrocarbons, *Journal of Geophysical Research*, 103 (D17), 22473-22490, 1998.
- Roberts, J.M., C.A. Stroud, B.T. Jobson, M. Trainer, D. Hereid, E.J. Williams, F.C. Fehsenfeld, W.H. Brune, M. Martinez, and H. Harder, Application of a sequential reaction model to PANs and aldehyde measurements in two urban areas, *Geophysical Research Letters*, 28 (24), 4583-4586, 2001.
- Roberts, J.M., F. Flocke, A. Weinheimer, H. Tanimoto, B.T. Jobson, D. Riemer, E.C. Apel, E. Atlas, S.G. Donnelly, V.F. Stroud, K. Johnson, R. Weaver, and F.C. Fehsenfeld, Observations of APAN during TexAQS 2000, *Geophysical Research Letters*, 28 (22), 4195-4198, 2001.
- Roberts, J.M., F. Flocke, C.A. Stroud, D. Hereid, E. Williams, F.C. Fehsenfeld, W. Brune, M. Martinez, and H. Harder, Ground-based measurements of peroxycarboxylic nitric anhydrides (PANs) during the 1999 Southern Oxidants Study Nashville Intensive, *Journal of Geophysical Research*, 107 (D21), 4554, doi:10.1029/2001JD000947, 2002.
- Roberts, J.M., B.T. Jobson, W.C. Kuster, P.D. Goldan, P.C. Murphy, E. Williams, G.J. Frost, D. Riener, E.C. Apel, C. Stroud, C. Wiedinmyer, and F.C. Fehsenfeld, An examination of the chemistry of peroxycarboxylic nitric anhydrides and related volatile organic compounds during Texas Air Quality Study 2000 using ground-based measurements, *Journal of Geophysical Research*, 108 (D16), 4495, doi:10.1029/2003JD003383, 2003.
- Roehl, C.M., J.B. Burkholder, G.K. Moortgat, A.R. Ravishankara, and P.J. Crutzen, Temperature dependence of UV absorption cross sections and atmospheric implications of several alkyl iodides, *Journal of Geophysical Research*, 102 (D11), 12819-12829, 1997.
- Rogers, R.R., D. Baumgardner, S.A. Ethier, D.A. Carter, and W.L. Ecklund, Comparison of raindrop size distribution measured by radar wind profiler and by airplane, *Journal of Applied Meteorology*, 32 (4), 694-699, 1993.
- Rogers, R.R., W.L. Ecklund, D.A. Carter, K.S. Gage, and S.A. Ethier, Research applications of a boundary-layer wind profiler, *Bulletin of the American Meteorological Society*, 74 (4), 567-580, 1993.
- Rogers, R.R., S.A. Cohn, W.L. Ecklund, J.S. Wilson, and D.A. Carter, Experience from one year of operating a boundary-layer profiler in the center of a large city, *Annales Geophysicae*, 12, 529-540, 1994.
- Rogers, R.R., S.G. Leblanc, S.A. Cohn, W.L. Ecklund, D.A. Carter, and J.S. Wilson, Profiler measurements of turbulence and wind shear in a snowstorm, *Contributions to Atmospheric Physics*, 69 (1), 27-36, 1996.
- Romashkin, P.A., D.F. Hurst, J.W. Elkins, G.S. Dutton, D.W. Fahey, R.E. Dunn, F.L. Moore, R.C. Myers, and B.D. Hall, In situ measurements of long-lived trace gases in the lower stratosphere by gas chromatography, *Journal of Atmospheric and Oceanic Technology*, 18, 1195-1204, 2001.
- Rosenlof, K.H., Seasonal cycle of the residual mean meridional circulation in the stratosphere, *Journal of Geophysical Research*, 100

(D3), 5173-5191, 1995.

Rosenlof, K.H., Summer hemisphere differences in temperature and transport in the lower stratosphere, *Journal of Geophysical Research*, 101 (D14), 19129-19136, 1996.

Rosenlof, K.H., A.F. Tuck, K.K. Kelly, J.M. Russell III, and M.P. McCormick, Hemispheric asymmetries in water vapor and inferences about transport in the lower stratosphere, *Journal of Geophysical Research*, 102 (D11), 13213-13234, 1997.

Rosenlof, K.H., Estimates of the seasonal cycle of mass and ozone transport at high northern latitudes, *Journal of Geophysical Research*, 104 (D21), 26511-26523, 1999.

Rosenlof, K.H., S.J. Oltmans, D. Kley, J.M. Russell III, E.-W. Chiou, W.P. Chu, D.G. Johnson, K.K. Kelly, H.A. Michelsen, G.E. Nedoluha, E.E. Remsberg, G.C. Toon, and M.P. McCormick, Stratospheric water vapor increases over the past half-century, *Geophysical Research Letters*, 28 (7), 1195-1198, 2001.

Rosenlof, K.H., Transport changes inferred from HALOE water and methane measurements, *Journal of the Meteorological Society of Japan*, 80 (4B), 831-848, 2002.

Rosenlof, K.H., How water enters the stratosphere, *Science*, 302, 1691-1692, 2003.

Ross, M.N., D.W. Toohey, W.T. Rawlins, E.C. Richard, K.K. Kelly, A.F. Tuck, M.H. Proffitt, D.E. Hagen, A.R. Hopkins, P.D. Whitefield, J.R. Benbrook, and W.R. Sheldon, Observations of stratospheric ozone depletion associated with Delta II Rocket emissions, *Geophysical Research Letters*, 27 (15), 2209-2212, 2000.

Rudich, Y., R. Talukdar, J.B. Burkholder, and A.R. Ravishankara, Reaction of methylbutenol with hydroxyl radical: Mechanism and atmospheric implications, *Journal of Physical Chemistry*, 99, 12188-12194, 1995.

Rudich, Y., R.K. Talukdar, R.W. Fox, and A.R. Ravishankara, Rate coefficients for reactions of NO_3 with a few olefins and oxygenated olefins, *Journal of Physical Chemistry*, 100 (13), 5374-5381, 1996.

Rudich, Y., R.K. Talukdar, and A.R. Ravishankara, Reactive uptake of NO_3 on pure water and ionic solutions, *Journal of Geophysical Research*, 101 (D15), 21023-21031, 1996.

Rudich, Y., R.K. Talukdar, T. Imamura, R.W. Fox, and A.R. Ravishankara, Uptake of NO_3 on KI solutions: Rate coefficient for the $\text{NO}_3 + \text{I}^-$ reaction and gas-phase diffusion coefficients for NO_3 , *Chemical Physics Letters*, 261, 467-473, 1996.

Rudich, Y., R.K. Talukdar, and A.R. Ravishankara, Multiphase chemistry of NO_3 in the remote troposphere, *Journal of Geophysical Research*, 103 (D13), 16133-16143, 1998.

Russell III, J.M., A.F. Tuck, L.L. Gordley, J.H. Park, S.R. Drayson, J.E. Harries, R.J. Cicerone, and P.J. Crutzen, HALOE Antarctic observations in the spring of 1991, *Geophysical Research Letters*, 20 (8), 719-722, 1993.

Russell III, J.M., L.L. Gordley, J.H. Park, S.R. Drayson, W.D. Hesketh, R.J. Cicerone, A.F. Tuck, J.E. Frederick, J.E. Harries, and P.J. Crutzen, The Halogen Occultation Experiment, *Journal of Geophysical Research*, 98 (D6), 10777-10797, 1993.

Russell III, J.M., L.E. Deaver, M. Luo, J.H. Park, L.L. Gordley, A.F. Tuck, G.C. Toon, M.R. Gunson, W.A. Traub, D.G. Johnson, K.W. Jucks, D.G. Murcray, R. Zander, I.G. Nolt, and C.R. Webster, Validation of hydrogen chloride measurements made by the Halogen Occultation Experiment from the UARS platform, *Journal of Geophysical Research*, 101, 10151-10162, 1996.

Ryerson, T.B., M.P. Buhr, G.J. Frost, P.D. Goldan, J.S. Holloway, G. Hübler, B.T. Jobson, W.C. Kuster, S.A. McKeen, D.D. Parrish, J.M. Roberts, D.T. Sueper, M. Trainer, J. Williams, and F.C. Fehsenfeld, Emissions lifetimes and ozone formation in power plant plumes, *Journal of Geophysical Research*, 103 (D17), 22569-22583, 1998.

Ryerson, T.B., L.G. Huey, K. Knapp, J.A. Neuman, D.D. Parrish, D.T. Sueper, and F.C. Fehsenfeld, Design and initial characterization of an inlet for gas-phase NO_y measurements from aircraft, *Journal of Geophysical Research*, 104 (D5), 5483-5492, 1999.

Ryerson, T.B., E.J. Williams, and F.C. Fehsenfeld, An efficient photolysis system for fast-response NO_2 measurements, *Journal of Geophysical Research*, 105 (D21), 26447-26461, 2000.

Ryerson, T.B., M. Trainer, J.S. Holloway, D.D. Parrish, L.G. Huey, D.T. Sueper, G.J. Frost, S.G. Donnelly, S. Schauffler, E.L. Atlas, W.C. Kuster, P.D. Goldan, G. Hübler, J.F. Meagher, and F.C. Fehsenfeld, Observations of ozone formation in power plant plumes and implications for ozone control strategies, *Science*, 292, 719-723, 2001.

Ryerson, T.B., M. Trainer, W.M. Angevine, C.A. Brock, R.W. Dissly, F.C. Fehsenfeld, G.J. Frost, P.D. Goldan, J.S. Holloway, G. Hübler, R.O. Jakoubek, W.C. Kuster, J.A. Neuman, D.K. Nicks, Jr., D.D. Parrish, J.M. Roberts, D.T. Sueper, E.L. Atlas, S.G. Donnelly, F. Flocke, A. Fried, W.T. Potter, S. Schauffler, V. Stroud, A.J. Weinheimer, B.P. Wert, C. Wiedinmyer, R.J. Alvarez, R.M. Banta, L.S. Darby, and C.J. Senff, Effect of petrochemical industrial emissions of reactive alkenes and NO_x on tropospheric ozone formation in Houston, Texas, *Journal of Geophysical Research*, 108 (D8), 4249, doi:10.1029/2002JD003070, 2003.

Ryerson, T.B., J.S. Holloway, R. Neuber, J. Roberts, J. Williams, C. Stroud, G.J. Frost, M. Trainer, G. Hübler, F.C. Fehsenfeld, F.

- Flocke, and A.J. Weinheimer, Fraction and composition of NO_y transported in air masses lofted from the North American continental boundary layer, *Journal of Geophysical Research, submitted*, doi:2003JD004226, 2003.
- Salawitch, R.J., S.C. Wofsy, E.W. Gottlieb, L.R. Lait, P.A. Newman, M.R. Schoeberl, M. Loewenstein, J.R. Podolske, S.E. Strahan, M.H. Proffitt, C.R. Webster, R.D. May, D.W. Fahey, D. Baumgardner, J.E. Dye, J.C. Wilson, K.K. Kelly, J.W. Elkins, K.R. Chan, and J.G. Anderson, Chemical loss of ozone in the Arctic polar vortex in the winter of 1991-1992, *Science*, 261, 1146-1149, 1993.
- Salawitch, R.J., S.C. Wofsy, P.O. Wennberg, R.C. Cohen, J.G. Anderson, D.W. Fahey, R.S. Gao, E.R. Keim, E.L. Woodbridge, R.M. Stimpfle, J.P. Koplak, D.W. Kohn, C.R. Webster, R.D. May, L. Pfister, E.W. Gottlieb, H.A. Michelsen, G.K. Yue, J.C. Wilson, C.A. Brock, H.H. Jonsson, J.E. Dye, D. Baumgardner, M.H. Proffitt, M. Loewenstein, J.R. Podolske, J.W. Elkins, G.S. Dutton, E.J. Hintsa, A.E. Dessler, E.M. Weinstock, K.K. Kelly, K.A. Boering, B.C. Daube, K.R. Chan, and S.W. Bowen, The distribution of hydrogen, nitrogen, and chlorine radicals in the lower stratosphere: Implications for changes on O₃ due to emission of NO_y from supersonic aircraft, *Geophysical Research Letters*, 21, 2547-2550, 1994.
- Salawitch, R.J., S.C. Wofsy, P.O. Wennberg, R.C. Cohen, J.G. Anderson, D.W. Fahey, R.S. Gao, E.R. Keim, E.L. Woodbridge, R.M. Stimpfle, J.P. Koplak, D.W. Kohn, C.R. Webster, R.D. May, L. Pfister, E.W. Gottlieb, H.A. Michelsen, G.K. Yue, M.J. Prather, J.C. Wilson, C.A. Brock, H.H. Jonsson, J.E. Dye, D. Baumgardner, M.H. Proffitt, M. Loewenstein, J.R. Podolske, J.W. Elkins, G.S. Dutton, E.J. Hintsa, A.E. Dessler, E.M. Weinstock, K.K. Kelly, K.A. Boering, B.C. Daube, K.R. Chan, and S.W. Bowen, The diurnal variation of hydrogen, nitrogen, and chlorine radicals: Implications for the heterogeneous production of HNO₂, *Geophysical Research Letters*, 21, 2551-2554, 1994.
- Sanders, R.W., S. Solomon, J.P. Smith, L. Perliski, H.L. Miller, G.H. Mount, J.G. Keys, and A.L. Schmeltekopf, Visible and near-ultraviolet spectroscopy at McMurdo Station, Antarctica: 9, Observations of OCIO from April to October 1991, *Journal of Geophysical Research*, 98 (D4), 7219-7228, 1993.
- Sanders, R.W., Improved analysis of atmospheric absorption spectra by including the temperature dependence of NO₂, *Journal of Geophysical Research*, 101 (D15), 20945-20952, 1996.
- Sanders, R.W., S. Solomon, K. Kreher, and P.V. Johnston, An intercomparison of NO₂ and OCIO measurements at Arrival Heights, Antarctica during Austral Spring 1996, *Journal of Atmospheric Chemistry*, 33, 283-298, 1999.
- Sandor, B.J., W.G. Read, J.W. Waters, and K.H. Rosenlof, Seasonal behavior of tropical to midlatitude upper tropospheric water vapor from UARS MLS, *Journal of Geophysical Research*, 103 (D20), 25935-25947, 1998.
- Schafer, R., P.T. May, T.D. Keenan, K. McGuffie, W.L. Ecklund, P.E. Johnston, and K.S. Gage, Boundary layer development over a tropical island during the Maritime Continent Thunderstorm Experiment, *Journal of the Atmospheric Sciences*, 58, 2163-2179, 2001.
- Schafer, R., S.K. Avery, and K.S. Gage, A comparison of VHF wind profiler observations and the NCEP/NCAR reanalysis over the tropical Pacific, *Journal of Applied Meteorology, submitted*, 2002.
- Schafer, R., S. Avery, P.T. May, D. Rajopadhyaya, and C.R. Williams, Estimation of drop size distributions from dual frequency wind profiler spectra using deconvolution and a nonlinear least squares fitting technique, *Journal of Atmospheric and Oceanic Technology*, 19, 864-874, 2002.
- Schauffler, S.M., L.E. Heidt, W.H. Pollock, T.M. Gilpin, J.F. Vedder, S. Solomon, R.A. Lueb, and E.L. Atlas, Measurements of halogenated organic compounds near the tropical tropopause, *Geophysical Research Letters*, 20 (22), 2567-2570, 1993.
- Schauffler, S.M., and J.S. Daniel, On the effects of stratospheric circulation changes on trace gas trends, *Journal of Geophysical Research*, 99 (D12), 25747-25754, 1994.
- Schauffler, S.M., W.H. Pollock, E.L. Atlas, L.E. Heidt, and J.S. Daniel, Atmospheric distribution of HCFC 141b, *Geophysical Research Letters*, 22 (7), 819-822, 1995.
- Schmoltner, A.M., R.K. Talukdar, R.F. Warren, A. Mellouki, L. Goldfarb, T. Gierczak, S.A. McKeen, and A.R. Ravishankara, Rate coefficients for reactions of several hydrofluorocarbons with OH and O(¹D) and their atmospheric lifetimes, *Journal of Physical Chemistry*, 97 (35), 8976-8982, 1993.
- Schoeberl, M.R., A.R. Douglass, R.S. Stolarski, P.A. Newman, L.R. Lait, D. Toohey, L. Avallone, J.G. Anderson, W. Brune, D.W. Fahey, and K.K. Kelly, The evolution of ClO and NO along air parcel trajectories, *Geophysical Research Letters*, 20 (22), 2511-2514, 1993.
- Seidel, D.J., R.J. Ross, J.K. Angell, and G.C. Reid, Climatological characteristics of the tropical tropopause as revealed by radiosondes, *Journal of Geophysical Research*, 106 (D8), 7857-7878, 2001.
- Sekelsky, S.M., W.L. Ecklund, J.M. Firda, K.S. Gage, and R.E. McIntosh, Particle size estimation in ice-phase cloud using multifrequency radar reflectivity measurements at 95, 33, and 2.8 GHz, *Journal of Applied Meteorology*, 38, 5-28, 1999.
- Selverstone, J., and D.S. Gutzler, Post-125 Ma carbon storage associated with continent-continent collision, *Geology*, 21, 885-888, 1993.

- Shetter, R.E., W. Junkermann, W.H. Swartz, G.J. Frost, J.H. Crawford, B.L. Lefer, J.D. Barrick, S.R. Hall, A. Hofzumahaus, A. Bais, J.G. Calvert, C.A. Cantrell, S. Madronich, M. Müller, A. Kraus, P.S. Monks, g.D. Edwards, R. McKenzie, P.E. Johnston, R. Schmitt, e. Griffioen, M. Krol, a. Kylling, R. Dickerson, S.A. Lloyd, T. Martin, b. Gardiner, B. Mayer, G. Pfister, E.P. Röth, P. Koepke, A. Ruggaber, H. Schwander, and M. VanWeele, Photolysis frequency of NO₂: Measurement and modeling during the International Photolysis Frequency Measurement and Modeling Intercomparison (IPMMI), *Journal of Geophysical Research*, submitted, 2002.
- Shine, K.P., M.S. Bourqui, P.M. de F. Forster, S.H.E. Hare, U. Langematz, P. Braesicke, V. Grewe, M. Ponater, C. Schnadt, C.A. Smith, J.D. Haigh, J. Austin, N. Butchart, D.T. Shindell, W.J. Randel, T. Nagashima, R.W. Portmann, S. Solomon, D.J. Seidel, J. Lanzante, S. Klein, V. Ramaswamy, and M.D. Schwarzkopf, A comparison of model-simulated trends in stratospheric temperatures, *Quarterly Journal of the Royal Meteorological Society*, 129, 1565-1588, doi: 10.1256/qj.02.186, 2003.
- Sierk, B., S. Solomon, J.S. Daniel, R.W. Portmann, S.I. Gutman, A.O. Langford, C.S. Eubank, E.G. Dutton, and K.H. Holub, DOAS field measurements of water vapor continuum absorption in the visible and near-infrared, *Journal of Geophysical Research*, submitted, 2003.
- Sierk, B., S. Solomon, J.S. Daniel, R.W. Portmann, S.I. Gutman, A.O. Langford, C.S. Eubank, K.H. Holub, and S.V. Florek, Field test of spectral line intensity parameters for tropospheric water vapor, *Journal of Geophysical Research*, 108 (D12), 4351, doi:10.1029/2002JD002985, 2003.
- Singh, H.B., D. Herlth, R. Kolyer, L. Salas, J.D. Bradshaw, S.T. Sandholm, D.D. Davis, J. Crawford, Y. Kondo, M. Koike, R. Talbot, G.L. Gregory, G.W. Sachse, E. Browell, D.R. Blake, F.S. Rowland, R. Newell, J. Merrill, B. Heikes, S.C. Liu, P.J. Crutzen, and M. Kanakidou, Reactive nitrogen and ozone over the western Pacific: Distribution, partitioning, and sources, *Journal of Geophysical Research*, 101 (D1), 1793-1808, 1996.
- Skamarock, W.C., J.G. Powers, M. Barth, J.E. Dye, T. Matejka, D. Bartels, K. Baumann, J. Stith, D.D. Parrish, and G. Hübner, Numerical simulations of the July 10 Stratospheric-Tropospheric Experiment: Radiation, Aerosols, and Ozone/Deep Convection Experiment convective system: Kinematics and transport, *Journal of Geophysical Research*, 105 (D15), 19973-19990, 2000.
- Slaper, H., G.J.M. Velders, J.S. Daniel, F.R. de Gruyl, and J.C. van der Leun, Estimates of ozone depletion and skin cancer incidence to examine the Vienna Convention achievements, *Nature*, 384, 256-258, 1996.
- Smith, J.P., S. Solomon, R.W. Sanders, H.L. Miller, L.M. Perliski, J.G. Keys, and A.L. Schmeltekopf, Atmospheric NO₃: 4, Vertical profiles at middle and polar latitudes at sunrise, *Journal of Geophysical Research*, 98 (D5), 8983-8989, 1993.
- Smith, I.W.M., and A.R. Ravishankara, Role of hydrogen-bonded intermediates in the bimolecular reactions of the hydroxyl radical, *The Journal of Physical Chemistry A*, submitted, 2001.
- Smith, I.W.M., and A.R. Ravishankara, Role of hydrogen-bonded intermediates in the bimolecular reactions of the hydroxyl radical, *The Journal of Physical Chemistry A*, 106 (19), doi:10.1021/jp014234w, pp. 4798-4807, 2002.
- Smyth, S., J. Bradshaw, S. Sandholm, S. Liu, S. McKeen, G. Gregory, B. Anderson, R. Talbot, D. Blake, S. Rowland, E. Browell, M. Fenn, J. Merrill, S. Bachmeier, G. Sachse, J. Collins, D. Thornton, D. Davis, and H. Singh, Comparison of free tropospheric western Pacific air mass classification schemes for the PEM-West A Experiment, *Journal of Geophysical Research*, 101, 1743-1762, 1996.
- Sobel, A.H., S.E. Yuter, C.S. Bretherton, and G.N. Kiladis, Large-scale meterology and deep convection during TRMM KWAJEX, *Monthly Weather Review*, inpress, 2003.
- Solomon, S., R.W. Sanders, R.R. Garcia, and J.G. Keys, Enhanced chlorine dioxide and ozone depletion in Antarctica caused due to volcanic aerosols, *Nature*, 363, 245-248, 1993.
- Solomon, S., J.P. Smith, R.W. Sanders, L. Perliski, H.L. Miller, G.H. Mount, J.G. Keys, and A.L. Schmeltekopf, Visible and near-ultraviolet spectroscopy at McMurdo Station, Antarctica: 8, Observations of nighttime NO₂ and NO₃ from April to October 1991, *Journal of Geophysical Research*, 98 (D1), 993-1000, 1993.
- Solomon, S., R.R. Garcia, and A.R. Ravishankara, On the role of iodine in ozone depletion, *Journal of Geophysical Research*, 99 (D10), 20491-20499, 1994.
- Solomon, S., J.B. Burkholder, A.R. Ravishankara, and R.R. Garcia, Ozone depletion and global warming potentials of CF₃I, *Journal of Geophysical Research*, 99 (D10), 20929-20935, 1994.
- Solomon, S., R.W. Sanders, R.O. Jakoubek, K.H. Arpag, S.L. Stephens, J.G. Keys, and R.R. Garcia, Visible and near-ultraviolet spectroscopy at McMurdo Station, Antarctica: 10, Reductions of stratospheric NO₂ due to Pinatubo aerosols, *Journal of Geophysical Research*, 99 (D2), 3509-3516, 1994.
- Solomon, S., and J.S. Daniel, Impact of the Montreal Protocol and its amendments on the rate of change of global radiative forcing, *Climatic Change*, 32, 7-17, 1996.

- Solomon, S., R.W. Portmann, R.R. Garcia, L.W. Thomason, L.R. Poole, and M.P. McCormick, The role of aerosol variations in anthropogenic ozone depletion at northern midlatitudes, *Journal of Geophysical Research*, 101 (D3), 6713-6727, 1996.
- Solomon, S., S. Borrmann, R.R. Garcia, R. Portmann, L. Thomason, L.R. Poole, D. Winker, and M.P. McCormick, Heterogeneous chlorine chemistry in the tropopause region, *Journal of Geophysical Research*, 102 (D17), 21411-21429, 1997.
- Solomon, S., R.W. Portmann, R.W. Sanders, and J.S. Daniel, Absorption of solar radiation by water vapor, oxygen, and related collision pairs in the Earth's atmosphere, *Journal of Geophysical Research*, 103 (D4), 3847-3858, 1998.
- Solomon, S., R.W. Portmann, R.R. Garcia, W. Randel, R. Wu, R. Nagatani, J. Gleason, L. Thomason, L.R. Poole, and M.P. McCormick, Ozone depletion at midlatitudes: Coupling of volcanic aerosols and temperature variability to anthropogenic chlorine, *Geophysical Research Letters*, 25 (11), 1871-1874, 1998.
- Solomon, S., Antarctic Feature Named for John F. Noxon, *EOS, Transactions, American Geophysical Union*, 80 (2), 15, 1999.
- Solomon, S., R.W. Portmann, R.W. Sanders, J.S. Daniel, W. Madsen, B. Bartram, and E.G. Dutton, On the role of nitrogen dioxide in the absorption of solar radiation, *Journal of Geophysical Research*, 104 (D10), 12047-12058, 1999.
- Solomon, S., Stratospheric ozone depletion: A review of concepts and history, *Reviews of Geophysics*, 37 (3), 275-316, 1999.
- Solomon, P.A., W.L. Chameides, R.J. Weber, A.M. Middlebrook, C.S. Kiang, A.G. Russell, A. Butler, B. Turpin, D. Mikel, R. Scheffe, E. Cowling, E. Edgerton, J. St. John, J. Jansen, P. McMurry, S.V. Hering, and T. Bahadori, Overview of the 1999 Atlanta Supersites Project, *Journal of Geophysical Research*, 108 (D7), doi:10.1029/2001JD001458, 2003.
- Stevens, P.S., J.H. Mather, W.H. Brune, F. Eisele, D. Tanner, A. Jefferson, C. Cantrell, R. Shetter, S. Sewall, A. Fried, B. Henry, E. Williams, K. Baumann, P. Goldan, and W. Kuster, HO₂/OH and RO₂/HO₂ ratios during the Tropospheric OH Photochemistry Experiment: Measurement and theory, *Journal of Geophysical Research*, 102 (D5), 6379-6391, 1997.
- Stimpfle, R.M., J.P. Koplav, R.C. Cohen, D.W. Kohn, P.O. Wennberg, D.M. Judah, D.W. Toohey, L.M. Avallone, J.G. Anderson, R.J. Salawitch, E.L. Woodbridge, C.R. Webster, R.D. May, M.H. Proffitt, K. Aikin, J. Margitan, M. Loewenstein, J.R. Podolske, L. Pfister, and K.R. Chan, The response of ClO radical concentrations to variations in NO₂ radical concentration in the lower stratosphere, *Geophysical Research Letters*, 21 (23), 2543-2546, 1994.
- Stimpfle, R.M., R.C. Cohen, G.P. Bonne, P.B. Voss, K.K. Perkins, L.C. Koch, J.G. Anderson, R.J. Salawitch, S.A. Lloyd, R.S. Gao, L.A. Del Negro, E.R. Keim, and T.P. Bui, The coupling of ClONO₂, ClO, and NO₂ in the lower stratosphere from in situ observations using the NASA ER-2 aircraft, *Journal of Geophysical Research*, 104 (D21 POLARIS), 26705-26714, 1999.
- Stith, J., J. Dye, B. Ridley, P. Laroche, E. Defer, K. Baumann, G. Hübner, R. Zerr, and M. Venticinque, NO signatures from lightning flashes, *Journal of Geophysical Research*, 104 (D13), 16081-16089, 1999.
- Stohl, A., E. Williams, G. Wotawa, and H. Kromp-Kolb, European inventory of soil nitric oxide emissions and the effect of these emissions on the photochemical formation of ozone, *Atmospheric Environment*, 30 (22), 3741-3755, 1996.
- Stohl, A., M. Trainer, T.B. Ryerson, J.S. Holloway, and D.D. Parrish, Export of NO_y from the North American boundary layer during 1996 and 1997 North Atlantic Regional Experiments, *Journal of Geophysical Research*, 107 (D11), 4131, doi:10.1029/2001JD000519, 2002.
- Stohl, A., C. Forster, S. Eckhardt, N. Spichtinger, H. Huntrieser, J. Heland, H. Schlager, H. Aufmhoff, F. Arnold, and O. Cooper, A backward modeling study of intercontinental pollution transport using aircraft measurements, *Journal of Geophysical Research*, 108 (D12), 4370, doi:10.1029/2002JD002862, 2003.
- Stohl, A., H. Huntrieser, A. Richter, S. Beirle, O. Cooper, S. Eckhardt, C. Forster, P. James, N. Spichtinger, M. Wenig, T. Wagner, J.P. Burrows, and U. Platt, Rapid intercontinental air pollution transport associated with a meteorological bomb, *Atmospheric Chemistry and Physics*, 3, 969-985, 2003.
- Straub, K.H., and G.N. Kiladis, Extratropical forcing of convectively coupled Kelvin waves during austral winter, *Journal of the Atmospheric Sciences*, submitted, 2002.
- Straub, K.H., and G.N. Kiladis, The observed structure of convectively coupled Kelvin waves: Comparison with simple models of coupled wave instability, *Journal of the Atmospheric Sciences*, submitted, 2002.
- Straub, K.H., and G.N. Kiladis, Interactions between the boreal summer intraseasonal oscillation and higher-frequency tropical wave activity, *Monthly Weather Review*, 131, 945-960, 2003.
- Straub, K.H., and G.N. Kiladis, The observed structure of convectively coupled Kelvin waves: Comparison with simple models of coupled wave instability, *Journal of the Atmospheric Sciences*, 60, 1655-1668, 2003.
- Strawa, A.W., K. Drdla, G.V. Ferry, S. Verma, R.F. Pueschel, M. Yasuda, R.J. Salawitch, R.S. Gao, S.D. Howard, P.T. Bui, M. Loewenstein, J.W. Elkins, K.K. Perkins, and R.C. Cohen, Carbonaceous aerosol (Soot) measured in the lower stratosphere during POLARIS and its role in stratospheric photochemistry, *Journal of Geophysical Research*, 104 (D21 POLARIS), 26753-26766, 1999.

- Stroud, C.A., J.M. Roberts, J. Williams, P.D. Goldan, W.C. Kuster, T.B. Ryerson, D.T. Sueper, D.D. Parrish, M. Trainer, F.C. Fehsenfeld, F. Flocke, S.M. Schauffler, V.F. Stroud, and E. Atlas, Alkyl nitrate measurements during STERAO 1996 and NARE 1997: Intercomparison and survey of results, *Journal of Geophysical Research*, 106 (D19), 23043-23053, 2001.
- Stroud, C.A., J.M. Roberts, P.D. Goldan, W.C. Kuster, P.C. Murphy, E.J. Williams, D. Hereid, D.D. Parrish, D.T. Sueper, M. Trainer, F.C. Fehsenfeld, E.C. Apel, D. Riemer, S. Hall, B. Lefer, R.E. Shetter, B. Wert, B. Henry, A. Fried, M. Martinez, H. Harder, J.B. Simpas, J. Bassis, W.H. Brune, G. Li, H. Xie, and V.L. Young, Isoprene and its oxidation products, methacrolein and methyl vinyl ketone, at an urban forested site during the 1999 Southern Oxidants Study, *Journal of Geophysical Research*, 106 (D8), 8035-8046, 2001.
- Stroud, C.A., J.M. Roberts, E.J. Williams, D. Heried, W.A. Angevine, F.C. Fehsenfeld, A. Wisthaler, A. Hansel, M. Martinez-Harder, H. Harder, W.H. Brune, G. Hoenninger, J. Stutz, and A.B. White, Nighttime isoprene trends at an urban forested site during the 1999 Southn Oxidant Study, *Journal of Geophysical Research*, 107 (D16), doi: 10.1029/2001JD000959, 2002.
- Stu, H.-H., J.C. Neeline, and D. Gutzler, Seasonal and interannual variability in a hydrid coupled GCM, *Journal of Climate*, 8, 2121-2143, 1995.
- Takahashi, K., T. Nakayama, Y. Matsumi, S. Solomon, T. Gejo, E. Shigemasa, and T.J. Wallington, Atmospheric lifetime of SF₅CF₃, *Geophysical Research Letters*, 29 (15), doi:10.1029/2002GL01536, 2002.
- Takegawa, N., K. Kita, Y. Kondo, Y. Matsumi, D.D. Parrish, J.S. Holloway, M. Koike, Y. Miyazaki, N. Toriyama, S. Kawakami, and T. Ogawa, Airborne vacuum ultraviolet resonance fluorescence instrument for in situ measurement of CO, *Journal of Geophysical Research*, 106 (D20), 24237-24244, 2001.
- Talukdar, R.K., A. Mellouki, T. Gierczak, S. Barone, S.-Y. Chiang, and A.R. Ravishankara, Kinetics of the reactions of OH with alkanes, *International Journal of Chemical Kinetics*, 26, 973-990, 1994.
- Talukdar, R.K., J.B. Burkholder, A.-M. Schmoltner, J.M. Roberts, R.R. Wilson, and A.R. Ravishankara, Investigation of the loss processes for peroxyacetyl nitrate in the atmosphere: UV photolysis and reaction with OH, *Journal of Geophysical Research*, 100 (D7), 14163-14173, 1995.
- Talukdar, R.K., T. Gierczak, L. Goldfarb, Y. Rudich, B.S. Madhava Rao, and A.R. Ravishankara, Kinetics of hydroxyl radical reactions with isotopically labelled hydrogen, *Journal of Physical Chemistry*, 100 (3), 3037-3043, 1996.
- Talukdar, R.K., and A.R. Ravishankara, Rate coefficients for O(¹D) + H₂, D₂, HD reactions and H atom yield in O(¹D) + HD reaction, *Chemical Physics Letters*, 253, 177-183, 1996.
- Talukdar, R.K., M. Hunter, R.F. Warren, J.B. Burkholder, and A.R. Ravishankara, UV laser photodissociation of CF₂ClBr and CF₂Br₂ at 298 K: Quantum yields of Cl, Br, and CF₂, *Chemical Physics Letters*, 262, 669-674, 1996.
- Talukdar, R.K., S.C. Herndon, J.B. Burkholder, J.M. Roberts, and A.R. Ravishankara, Atmospheric fate of several alkyl nitrates: Part 1, Rate coefficients of the reactions of alkyl nitrates with isotopically labelled hydroxyl radicals, *Journal of the Chemical Society, Faraday Transactions*, 93 (16), 2787-2796, 1997.
- Talukdar, R.K., J.B. Burkholder, M. Hunter, M.K. Gilles, J.M. Roberts, and A.R. Ravishankara, Atmospheric fate of several alkyl nitrates: Part 2, UV absorption cross-sections and photodissociation quantum yields, *Journal of the Chemical Society, Faraday Transactions*, 93 (16), 2797-2805, 1997.
- Talukdar, R.K., M.K. Gilles, F. Battin-Leclerc, A.R. Ravishankara, J.-M. Fracheboud, J.J. Orlando, and G.S. Tyndall, Photolysis of ozone at 308 and 248 nm: Quantum yield of O(¹D) as a function of temperature, *Geophysical Research Letters*, 24 (9), 1091-1094, 1997.
- Talukdar, R.K., C.A. Longfellow, M.K. Gilles, and A.R. Ravishankara, Quantum yields of O(¹D) in the photolysis of ozone between 289 and 329 nm as a function of temperature, *Geophysical Research Letters*, 25 (2), 143-146, 1998.
- Talukdar, R.K., A. Mellouki, J.B. Burkholder, M.K. Gilles, G. Le Bras, and A.R. Ravishankara, Quantification of the tropospheric removal of chloral (CCl₃CHO): Rate coefficient for the reaction with OH, UV absorption cross sections, and quantum yields, *The Journal of Physical Chemistry A*, 105 (21), 5188-5196, 2001.
- Talukdar, R.K., E.J. Dunlea, S.S. Brown, J.S. Daniel, and A.R. Ravishankara, Kinetics of O₂(¹S_g⁺) reaction with H₂ and an upper limit for OH production, *The Journal of Physical Chemistry A*, 106 (36), 10.1021/jp020589j, pp. 8461-8470, 2002.
- Talukdar, R.K., T. Gierczak, D.C. McCabe, and A.R. Ravishankara, Reaction of hydroxyl radical with acetone. 2. Products and reaction mechanism, *The Journal of Physical Chemistry A*, 107 (25), doi:10.1021/jp0273023, pp. 5021-5032, 2003.
- Tao, X., and A.F. Tuck, On the distribution of cold air near the vortex edge in the lower stratosphere, *Journal of Geophysical Research*, 99 (D2), 3431-3450, 1994.
- Tervahattu, H., K. Hartonen, V.-M. Kerminen, V. Vaida, A.F. Tuck, K. Kupainen, P. Aarnio, and T. Koskentalo, New evidence of an organic layer on marine aerosols, *Journal of Geophysical Research*, 107 (D7), doi: 10.1029/2000JD000282, 2002.
- Thomas, E.R., G.J. Frost, and Y. Rudich, Reactive uptake of ozone by proxies for organic aerosols: Surface-bound and gas-phase

- products, *Journal of Geophysical Research*, 106 (D3), 3045-3056, 2001.
- Thompson, J.E., and A.R. Ravishankara, Kinetics of the O(¹D) reactions with bromocarbons, *International Journal of Chemical Kinetics*, 25, 479-487, 1993.
- Thompson, D.W.J., and S. Solomon, Interpretation of recent Southern Hemisphere climate change, *Science*, 296, 895-899, 2002.
- Thompson, D.W.J., M.P. Baldwin, and S. Solomon, Stratospheric precursors of tropospheric climate anomalies in the Southern Hemisphere: 1979-2002, *Journal of the Atmospheric Sciences*, submitted, 2003.
- Thomson, D.S., and D.M. Murphy, Laser-induced ion formation thresholds of aerosol particles in a vacuum, *Applied Optics*, 32 (33), 6818-6826, 1993.
- Thomson, D.S., and D.M. Murphy, Analyzing single aerosol particles in real time, *Chemtech*, 24, 30-35, 1994.
- Thomson, D.S., A.M. Middlebrook, and D.M. Murphy, Thresholds for laser-induced ion formation from aerosols in a vacuum using ultraviolet and vacuum-ultraviolet laser wavelengths, *Aerosol Science and Technology*, 26, 544-559, 1997.
- Thomson, D.S., M.E. Schein, and D.M. Murphy, Particle analysis by laser mass spectrometry WB-57 instrument overview, *Aerosol Science and Technology*, 33, 153-169, 2000.
- Thornton, J.A., P.J. Wooldridge, R.C. Cohen, M. Martinez, H. Harder, W.H. Brune, E.J. Williams, J.M. Roberts, F.C. Fehsenfeld, S.R. Hall, R.E. Shetter, B.P. Wert, and A. Fried, Ozone production rates as a function of NO_x abundances and HO_x production rates in the Nashville urban plume, *Journal of Geophysical Research*, 107 (D12), 10.1029/2001JD000932, 2002.
- Thornton, J.A., P.J. Wooldridge, R.C. Cohen, E.J. Williams, D. Hereid, F.C. Fehsenfeld, J. Stutz, and B. Aliche, comparisons of in situ and long path measurements of NO₂ in urban plumes, *Journal of Geophysical Research*, 108 (D16), 4496, doi:10.1029/2003JD003559, 2003.
- Tie, X.X., G. Brasseur, X. Lin, P. Friedlingstein, C. Granier, and P. Rasch, The impact of high altitude aircraft on the ozone layer in the stratosphere, *Journal of Atmospheric Chemistry*, 18, 103-128, 1994.
- Tie, X.X., X. Lin, and G. Brasseur, Two-dimensional coupled dynamical/chemical/microphysical simulation of global distribution of El Chichón volcanic aerosols, *Journal of Geophysical Research*, 99 (D8), 16779-16792, 1994.
- Tisdale, R.T., A.M. Middlebrook, A.J. Prenni, and M.A. Tolbert, Crystallization kinetics of HNO₃/H₂O films representative of polar stratospheric clouds, *Journal of Physical Chemistry A*, 101, 2112-2119, 1997.
- Tokay, A., D.A. Short, C.R. Williams, W.L. Ecklund, and K.S. Gage, Tropical rainfall associated with convective and stratiform clouds: Intercomparison of disdrometer and profiler measurements, *Journal of Applied Meteorology*, 38, 302-320, 1999.
- Toohey, D.W., L.M. Avallone, L.R. Lait, P.A. Newman, M.R. Schoeberl, D.W. Fahey, E.L. Woodbridge, and J.G. Anderson, The seasonal evolution of reactive chlorine in the Northern Hemisphere stratosphere, *Science*, 261, 1134-1136, 1993.
- Toon, G.C., J.-F. Blavier, B. Sen, J.J. Margitan, C.R. Webster, M. R.D., D.W. Fahey, R. Gao, L. Del Negro, M. Proffitt, J. Elkins, P.A. Romashkin, D.F. Hurst, S. Oltmans, E. Atlas, S. Schauffler, F. Flocke, T.P. Bui, R.M. Stimpfle, G.P. Bonne, P.B. Voss, and R.C. Cohen, Comparison of MkIV balloon and ER-2 aircraft measurements of atmospheric trace gases, *Journal of Geophysical Research*, 104 (D21 POLARIS), 26779-26790, 1999.
- Trainer, M., D.D. Parrish, M.P. Buhr, R.B. Norton, F.C. Fehsenfeld, K.G. Anlauf, J.W. Bottenheim, Y.Z. Tang, H.A. Weibe, J.M. Roberts, R.L. Tanner, L. Newman, V.C. Bowersox, J.F. Meagher, K.J. Olszyna, M.O. Rodgers, T. Wang, H. Berresheim, K.L. Demerjian, and U.K. Roychowdhury, Correlation of ozone with NO_y in photochemically aged air, *Journal of Geophysical Research*, 98 (D2), 2917-2925, 1993.
- Trainer, M., B.A. Ridley, M.P. Buhr, G. Kok, J. Walega, G. Hübner, D.D. Parrish, and F.C. Fehsenfeld, Regional ozone and urban plumes in the southeastern United States: Birmingham, a case study, *Journal of Geophysical Research*, 100, 18823-18834, 1995.
- Trainer, M., D.D. Parrish, P.D. Goldan, J. Roberts, and F.C. Fehsenfeld, Review of observation-based analysis of the regional factors influencing ozone concentrations, *Atmospheric Environment*, 34 (12-14), 2045-2061, 2000.
- Trickl, T., O.R. Cooper, H. Eisele, P. James, R. Mücke, and A. Stohl, Intercontinental transport and its influence on the ozone concentrations over central Europe: Three case studies, *Journal of Geophysical Research*, 108 (D12), 8530, doi:10.1029/2002JD002735, 2003.
- Tsuda, T., T.E. Van Zandt, and H. Saito, Zenith-angle dependence of VHF specular reflection echoes in the lower atmosphere, *Journal of Atmospheric and Solar-Terrestrial Physics*, 59 (7), 761-775, 1997.
- Tsunoda, R.T., W.L. Ecklund, and P.E. Johnston, Radar measurements of electric fields in the topside of the equatorial electrojet: First results, *Geophysical Research Letters*, 27 (18), 2861-2864, 2000.
- Tuck, A.F., S.J. Hovde, K.K. Kelly, J.M. Russell III, C.R. Webster, and R.D. May, Intercomparison of HALOE and ER-2 aircraft H₂O and CH₄ observations collected during the Second Airborne Arctic Stratospheric Experiment (AASE-II), *Geophysical*

- Research Letters, 20 (12), 1243-1246, 1993.
- Tuck, A.F., J.M. Russell III, and J.E. Harries, Stratospheric dryness: Antiphased desiccation over Micronesia and Antarctica, *Geophysical Research Letters*, 20 (12), 1227-1230, 1993.
- Tuck, A.F., D.W. Fahey, M. Loewenstein, J.R. Podolske, K.K. Kelly, S.J. Hovde, D.M. Murphy, and J.W. Elkins, Spread of denitrification from the 1987 Antarctic and 1988-1989 Arctic stratospheric vortices, *Journal of Geophysical Research*, 99 (D10), 20573-20583, 1994.
- Tuck, A.F., K.K. Kelly, C.R. Webster, M. Loewenstein, R.M. Stimpfle, M.H. Proffitt, and K.R. Chan, Airborne chemistry and dynamics at the edge of the 1994 Antarctic vortex, *Journal of the Chemical Society, Faraday Transactions*, 91 (18), 3063-3071, 1995.
- Tuck, A.F., C.R. Webster, R.D. May, D.C. Scott, S.J. Hovde, J.W. Elkins, and K.R. Chan, Time and temperature dependences of fractional HCl abundances from airborne data in the Southern Hemisphere during 1994, *Faraday Discussions of the Chemical Society*, 100, 389-410, 1995.
- Tuck, A.F., W.H. Brune, and R.S. Hipskind, Airborne Southern Hemisphere Ozone Experiment/Measurements for Assessing the Effects of Stratospheric Aircraft (ASHOE/MAESA): A road map, *Journal of Geophysical Research*, 102 (D3), 3901-3904, 1997.
- Tuck, A.F., D. Baumgardner, K.R. Chan, J.E. Dye, J.W. Elkins, S.J. Hovde, K.K. Kelly, M. Loewenstein, J.J. Margitan, R.D. May, J.R. Podolske, M.H. Proffitt, K.H. Rosenlof, W.L. Smith, C.R. Webster, and J.C. Wilson, The Brewer-Dobson circulation in the light of high altitude in situ aircraft observations, *Quarterly Journal of the Royal Meteorological Society*, 123 (537), 1-69, 1997.
- Tuck, A.F., and M.H. Proffitt, Comment on "On the magnitude of transport out of the Antarctic polar vortex" by Wiel M. F. Wauben et al., *Journal of Geophysical Research*, 102 (D23), 28215-28218, 1997.
- Tuck, A.F., and S.J. Hovde, Fractal behavior of ozone, wind and temperature in the lower stratosphere, *Geophysical Research Letters*, 26 (9), 1271-1274, 1999.
- Tuck, A.F., S.J. Hovde, and M.H. Proffitt, Persistence in ozone scaling under the Hurst Exponent as an indicator of the relative rates of chemistry and fluid mechanical mixing in the stratosphere, *Journal of Physical Chemistry A*, 103 (49), 10445*10450, 1999.
- Tuck, A.F., Atmospheric aerosols and origin of life, *Survey of Geophysics*, 23, 379-, 2001.
- Tuck, A.F., The role of atmospheric aerosols in the origin of life, *Survey of Geophysics*, 23 (379-409), 2002.
- Tuck, A.F., S.J. Hovde, E.C. Richard, D.W. Fahey, and R.S. Gao, A scaling analysis of ER-2 data in the inner vortex during January-March 2000, *Journal of Geophysical Research*, 107, doi: 10.1029/2001JD000879, 2002.
- Tuck, A.F., S.J. Hovde, K.K. Kelly, M.J. Mahoney, M.H. Proffitt, E.C. Richard, and T.L. Thompson, Exchange between the upper tropical troposphere and the lower stratosphere studied with aircraft observations, *Journal of Geophysical Research, submitted*, 108, doi:10.1029/2003JD003399, 2003.
- Tuck, A.F., S.J. Hovde, K.K. Kelly, S.J. Reid, E.C. Richard, E.L. Atlas, S.G. Donnelly, V.R. Stroud, D.J. Cziczo, D.M. Murphy, D.S. Thomson, J.W. Elkins, F.L. Moore, E.A. Ray, M.J. Mahoney, and R.R. Friedl, Horizontal variability 1-2 km below the tropical tropopause, *Journal of Geophysical Research, submitted*, 108, doi:10.1029/2003JD003942, 2003.
- Tuck, A.F., S.J. Hovde, R.S. Gao, and E.C. Richard, The law of mass action in the arctic lower stratospheric polar vortex January-March 2000: ClO scaling and the calculation of ozone loss rates in a turbulent fractal medium, *Journal of Geophysical Research, in press*, doi:10.1029/2002JD002832, 2003.
- Turnipseed, A.A., S.B. Barone, and A.R. Ravishankara, The reactions of CH₃S and CH₃SOO with O₃, NO₂, and NO, *Journal of Physical Chemistry*, 97, 5926-5934, 1993.
- Turnipseed, A.A., S.B. Barone, and A.R. Ravishankara, Kinetics of the reactions of CF₃O_x radicals with NO, O₃, and O₂, *Journal of Physical Chemistry*, 98 (17), 4594-4601, 1994.
- Turnipseed, A.A., S.B. Barone, N.R. Jensen, D.R. Hanson, C.J. Howard, and A.R. Ravishankara, Kinetics of the reactions of CF₃O radicals with CO H₂O, *Journal of Physical Chemistry*, 99, 6000-6009, 1995.
- Turnipseed, A.A., M.K. Gilles, J.B. Burkholder, and A.R. Ravishankara, LIF detection of IO and the rate coefficients for I + O₃ and IO + NO reactions, *Chemical Physics Letters*, 242, 427-434, 1995.
- Turnipseed, A.A., S.B. Barone, and A.R. Ravishankara, Reaction of OH with dimethyl sulfide: 2, Products and mechanisms, *Journal of Physical Chemistry*, 100 (35), 14703-14713, 1996.
- Turnipseed, A.A., M.K. Gilles, J.B. Burkholder, and A.R. Ravishankara, Kinetics of the IO radical. 1. Reaction of IO with ClO, *Journal of Physical Chemistry A*, 101 (30), 5517-5525, 1997.

- Tyndall, G.S., R.A. Cox, C. Granier, R. Lesclaux, G.K. Moortgat, M.J. Pilling, A.R. Ravishankara, and T.J. Wallington, Atmospheric chemistry of small organic peroxy radicals, *Journal of Geophysical Research*, 106 (D11), 12157-12182, 2001.
- Vaida, V., A.F. Tuck, and G.B. Ellison, Optical and chemical properties of atmospheric organic aerosols, *Physics and Chemistry of the Earth C*, 25 (3), 195-198, 2000.
- Vaida, V., J.S. Daniel, H. Kjaergaard, L.M. Goss, and A.F. Tuck, Atmospheric absorption of near infrared and visible solar radiation by the hydrogen bonded water dimer, *Quarterly Journal of the Royal Meteorological Society*, 127, 1627-1643, 2001.
- Vakhtin, A.B., D.C. McCabe, A.R. Ravishankara, and S.R. Leone, Low-temperature kinetics of the reaction of the OH radical with hydrogen peroxide, *Journal of Physical Chemistry*, 107, 10642-10647, doi:10.1021/jp030424q, 2003.
- Valente, R.J., F.C. Thornton, and E.J. Williams, Field comparison of static and flow-through chamber techniques for measurement of soil NO emission, *Journal of Geophysical Research*, 100 (D10), 21147-21152, 1995.
- VanZandt, T.E., A brief history of the development of wind-profiling or MST radars, *Annales Geophysicae*, 18, 740-749, 2000.
- VanZandt, T.E., W.L. Clark, K.S. Gage, C.R. Williams, and W.L. Ecklund, A dual-wavelength radar technique for measuring the turbulent energy dissipation rate epsilon, *Geophysical Research Letters*, 27 (16), 2537-2540, 2000.
- VanZandt, T.E., G.D. Nastrom, J. Furumoto, T. Tsuda, and W.L. Clark, A dual-beamwidth radar method for measuring atmospheric turbulent kinetic energy, *Geophysical Research Letters*, 29 (12), 1572, doi:10.1029/2001GL014283, 2002.
- Velders, G.J.M., C. Granier, S. Solomon, K. Pfeilsticker, M. Wenig, T. Wagner, and U. Platt, Global tropospheric NO₂ columns: Comparing model calculations with GOME measurements, *Journal of Geophysical Research*, 106 (D12), 12643-12660, 2001.
- Velders, G.J.M., and C. Granier, Sensitivity of wet deposition on HNO₃/No_x ratio in atmospheric chemistry models, *Journal of Geophysical Research*, 106, 3125-3132, 2001.
- Villalta, P.W., L.G. Huey, and C.J. Howard, A temperature-dependent kinetics study of the CH₃O₂ + NO reaction using chemical ionization mass spectrometry, *Journal of Physical Chemistry*, 99, 12829-12834, 1995.
- Villalta, P.W., and C.J. Howard, Direct kinetics study of the CH₃C(O)O₂ + NO reaction using chemical ionization mass spectrometry, *Journal of Physical Chemistry*, 100 (32), 13624-13628, 1996.
- Villalta, P.W., E.R. Lovejoy, and D.R. Hanson, Reaction probability of peroxyacetyl radical on aqueous surfaces, *Geophysical Research Letters*, 23 (14), 1765-1768, 1996.
- Volk, C.M., J.W. Elkins, D.W. Fahey, R.J. Salawitch, G.S. Dutton, J.M. Gilligan, M.H. Proffitt, M. Loewenstein, J.R. Podolske, K. Minschwaner, J.J. Margitan, and K.R. Chan, Quantifying transport between the tropical and mid latitude lower stratosphere, *Science*, 272, 1763-1768, 1996.
- Volk, C.M., J.W. Elkins, D.W. Fahey, G.S. Dutton, J.M. Gilligan, M. Loewenstein, J.R. Podolske, K.R. Chan, and M.R. Gunson, Evaluation of source gas lifetimes from stratospheric observations, *Journal of Geophysical Research*, 102 (D21), 25543-25564, 1997.
- von Savigny, C., O. Funk, U. Platt, and K. Pfeilsticker, Radiative smoothing in zenith-scattered skylight transmitted through optically thick clouds to the ground, *Geophysical Research Letters*, 26 (19), 2949-2952, 1999.
- Wamsley, P.R., J.W. Elkins, D.W. Fahey, G.S. Dutton, C.M. Volk, R.C. Myers, S.A. Montzka, J.H. Butler, A.D. Clarke, P.J. Fraser, L.P. Steele, M.P. Lucarelli, E.L. Atlas, S.M. Schauffler, D.R. Blake, F.S. Rowland, W.T. Sturges, J.M. Lee, S.A. Penkett, A. Engel, R.M. Stimpfle, K.R. Chan, D.K. Weisenstein, M.K.W. Ko, and R.J. Salawitch, Distribution of halon-1211 in the upper troposphere and lower stratosphere and the 1994 total bromine budget, *Journal of Geophysical Research*, 103, 1513-1526, 1998.
- Wang, T., M.A. Carroll, G.M. Albercook, K.R. Owens, K.A. Duderstadt, A.N. Markevitch, D.D. Parrish, J.S. Holloway, F.C. Fehsenfeld, G. Forbes, and J. Ogren, Ground-based measurements of NO_x and total reactive oxidized nitrogen (NO_y) at Sable Island, Nova Scotia, during the NARE 1993 summer intensive, *Journal of Geophysical Research*, 101 (D22), 28991-29004, 1996.
- Warneke, C., S.L. Luxembourg, J.A. de Gouw, H.J.I. Rinne, A.B. Guenther, and R. Fall, Disjunct eddy covariance measurements of oxygenated volatile organic compounds fluxes from an alfalfa field before and after cutting, *Journal of Geophysical Research*, 107 (D8), ACH- 6-1 to ACH 6-11, 2002.
- Warneke, C., J.A. de Gouw, W.C. Kuster, P.D. Goldan, and R. Fall, Validation of atmospheric VOC measurements by Proton-Transfer-Reaction Mass Spectrometry using a gas-chromatographic preseparation method, *Environmental Science and Technology*, 37 (11), 2494-2501, Doi: 10.1021/es026266i, 2003.
- Warnock, J.M., T.E. Van Zandt, W.L. Clark, S.J. Franke, H.S. Kim, G.D. Nastrom, and P.E. Johnston, Measurements of synoptic-scale vertical velocities by two nearby VHF Doppler radars in very flat terrain, *Journal of Atmospheric and Oceanic Technology*, 11 (1), 5-13, 1994.

- Warren, R.F., and A.R. Ravishankara, Kinetics of Cl(2P) reactions with CF₃CHCl₂, CF₃CHFCl, and CH₃CFCl₂, *International Journal of Chemical Kinetics*, 25, 833-844, 1993.
- Watkins, B.A., D.D. Parrish, S. Buhr, R.B. Norton, M. Trainer, J.E. Yee, and F.C. Fehsenfeld, Factors influencing the concentration of gas phase hydrogen peroxide during the summer at Kinterbush, Alabama, *Journal of Geophysical Research*, 100 (D11), 22841-22851, 1995.
- Watkins, B.A., D.D. Parrish, M. Trainer, R.B. Norton, J.E. Yee, F. Fehsenfeld, and B.G. Heikes, Factors influencing the concentration of gas phase hydrogen peroxide during the summer at Niwot Ridge, Colorado, *Journal of Geophysical Research*, 100 (D11), 22831-22840, 1995.
- Waugh, D.W., R.A. Plumb, J.W. Elkins, D.W. Fahey, K.A. Boering, G.S. Dutton, C.M. Volk, E. Keim, R.-S. Gao, B.C. Daube, S.C. Wofsy, M. Loewenstein, J.R. Podolske, K.R. Chan, M.H. Proffitt, K.K. Kelly, P.A. Newman, and L.R. Lait, Mixing of polar vortex air into middle latitudes as revealed by tracer-tracer scatterplots, *Journal of Geophysical Research*, 102 (D11), 13119-13134, 1997.
- Waugh, D.W., T.M. Hall, W.J. Randel, P.J. Rasch, B.A. Boville, K.A. Boering, S.C. Wofsy, B.C. Daube, J.W. Elkins, D.W. Fahey, G.S. Dutton, C.M. Volk, and P.F. Vohralik, Three-dimensional simulations of long lived tracers using winds from MACCM2, *Journal of Geophysical Research*, 102, 21493-21513, 1997.
- Weaver, A., S. Solomon, R.W. Sanders, K. Arpag, and H.L. Miller, Jr., Atmospheric NO₃: 5, Off-axis measurements at sunrise: Estimates of tropospheric NO₃ at 40°N, *Journal of Geophysical Research*, 101 (D13), 18605-18612, 1996.
- Webster, C.R., R.D. May, D.W. Toohey, L.M. Avallone, J.G. Anderson, and S. Solomon, In situ measurements of the ClO/HCl ratio: Heterogeneous processing on sulfate aerosols and polar stratospheric clouds, *Geophysical Research Letters*, 20 (22), 2523-2526, 1993.
- Webster, C.R., R.D. May, H.A. Michelsen, D.C. Scott, J.C. Wilson, H.H. Jonsson, C.A. Brock, J.E. Dye, D. Baumgardner, R. Stimpfle, J.P. Koplow, J.J. Margitan, M.H. Proffitt, L. Jaeglé, R.L. Herman, H. Hu, G.J. Flesch, and M. Loewenstein, Evolution of HCl concentrations in the lower stratosphere from 1991 to 1996 following the eruption of Mount Pinatubo, *Geophysical Research Letters*, 25 (7), 995-998, 1998.
- Weickmann, K.M., G.N. Kiladis, and P.D. Sardeshmukh, The dynamics of intraseasonal atmospheric angular momentum oscillations, *Journal of the Atmospheric Sciences*, 54 (11), 1445-1461, 1997.
- Weinheimer, A.J., D.D. Montzka, T.L. Campos, J.G. Walega, B.A. Ridley, S.G. Donnelly, E.R. Keim, L.A. Del Negro, M.H. Proffitt, J.J. Margitan, K.A. Boering, A.E. Andrews, B.C. Daube, S.C. Wofsy, B.E. Anderson, J.E. Collins, G.W. Sachse, S.A. Vay, J.W. Elkins, P.R. Wamsley, E.L. Atlas, F. Flocke, S. Schauffler, C.R. Webster, R.D. May, M. Loewenstein, J.R. Podolske, T.P. Bui, K.R. Chan, S.W. Bowen, M.R. Schoeberl, L.R. Lait, and P.A. Newman, Comparison between DC-8 and ER-2 species measurements in the tropical middle troposphere: NO, NO_y, O₃, CO₂, CH₄, and N₂O, *Journal of Geophysical Research*, 103 (D17), 22087-22096, 1998.
- Weinstock, J., Gravity wave activity at various latitudes and heights in the middle atmosphere, *Advances in Space Research*, 17 (11), 57-66, 1996.
- Weinstock, J., Spectra and a global source of gravity waves for the middle atmosphere, *Advances in Space Research*, 17 (11), 67-76, 1996.
- Weinstock, J., Theory for the off-diagonal element of dissipation in homogeneous shear turbulence, *Physics of Fluids*, 9, 2171-2173, 1997.
- Weinstock, J., Derivation of the Kolmogorov spectrum by three-point closure theory, *Journal of Fluid Mechanics*, submitted, 2000.
- Weinstock, J., On the validity of a diffusion approximation for spectral energy transfer in homogeneous turbulence, *Journal of Fluid Mechanics*, submitted, 2000.
- Wennberg, P.O., R.C. Cohen, R.M. Stimpfle, J.P. Koplow, J.G. Anderson, R.J. Salawitch, D.W. Fahey, E.L. Woodbridge, E.R. Keim, R.S. Gao, C.R. Webster, R.D. May, D.W. Toohey, L.M. Avallone, M.H. Proffitt, M. Loewenstein, J.R. Podolske, K.R. Chan, and S.C. Wofsy, Removal of stratospheric O₃ by radicals: In situ measurements of OH, HO₂, NO, NO₂, ClO, and BrO, *Science*, 266, 398-404, 1994.
- Wennberg, P.O., J.W. Brault, T.F. Hanisco, R.J. Salawitch, and G.H. Mount, The atmospheric column abundance of IO: Implications for stratospheric ozone, *Journal of Geophysical Research*, 102 (D7), 8887-8898, 1997.
- Wennberg, P.O., T.F. Hanisco, L. Jaeglé, D.J. Jacob, E.J. Hintsa, E.J. Lanzendorf, J.G. Anderson, R.S. Gao, E.R. Keim, S.G. Donnelly, L.A. Del Negro, D.W. Fahey, S.A. McKeen, R.J. Salawitch, C.R. Webster, R.D. May, R.L. Herman, M.H. Proffitt, J.J. Margitan, E.L. Atlas, S.M. Schauffler, F. Flocke, C.T. McElroy, and T.P. Bui, Hydrogen radicals, nitrogen radicals, and the production of O₃ in the upper troposphere, *Science*, 279, 49-53, 1998.
- Wennberg, P.O., R.J. Salawitch, D.J. Donaldson, T.F. Hanisco, E.J. Lanzendorf, K.K. Perkins, S.A. Lloyd, V. Vaida, R.S. Gao, E.J. Hintsa, R.C. Cohen, W.H. Swartz, T.L. Kusterer, and D.E. Anderson, Twilight observations suggest unknown sources of

HO_x, *Geophysical Research Letters*, 26 (10), 1373-1376, 1999.

- Wert, B., M. Trainer, A. Fried, T.B. Ryerson, B. Henry, W. Potter, W.M. Angevine, E. Atlas, S.G. Donnelly, F.C. Fehsenfeld, G.J. Frost, P.D. Goldan, A. Hansel, J.S. Holloway, G. Hübler, W.C. Kuster, D.K. Nicks, Jr., J.A. Neuman, D.D. Parrish, S. Schaufler, J. Stutz, D.T. Sueper, C. Wiedinmyer, and A. Wisthaler, Signatures of terminal alkene oxidation in airborne formaldehyde measurements during TexAQS 2000, *Journal of Geophysical Research*, 108 (D3), 4104, doi:10.1029/2002JD002502, 2003.
- Westwater, E.R., Y. Han, J.B. Snider, J.H. Churnside, J.A. Shaw, M.J. Falls, C.N. Long, T.P. Ackerman, K.S. Gage, W. Ecklund, and A. Riddle, Ground-based remote sensor observations during PROBE in the tropical western Pacific, *Bulletin of the American Meteorological Society*, 80 (2), 257-270, 1999.
- Wheeler, M., and G.N. Kiladis, Convectively coupled equatorial waves: Analysis of clouds and temperature in the wavenumber-frequency domain, *Journal of the Atmospheric Sciences*, 56, 374-399, 1999.
- Wheeler, M., G.N. Kiladis, and P.J. Webster, Large-scale dynamical fields associated with convectively coupled equatorial waves, *Journal of the Atmospheric Sciences*, 57 (5), 613-640, 2000.
- White, A.B., B.D. Templeman, W.A. Angevine, R.J. Zamora, C.W. King, C.A. Russell, R.M. Banta, W.A. Brewer, and K.J. Olszyna, Regional contrast in morning transitions observed during the 1999 Southern Oxidants Study Nashville/Middle Tennessee Intensive, *Journal of Geophysical Research*, 107 (D23), 4726, doi:10.1029/2001JD002036, 2002.
- Widiyatmi, I., H. Hashiguchi, S. Fukao, M.D. Yamanaka, S.-Y. Ogino, K.S. Gage, S.W.B. Harijono, S. Diharto, and H. Djojodihardjo, Examination of 3-6 day disturbances over equatorial Indonesia based on boundary layer radar observations during 1996-1999 at Bukittinggi, Serpong and Biak, *Journal of the Meteorological Society of Japan*, 79 (1B), 317-331, 2001.
- Wilczak, J.M., R.G. Strauch, F.M. Ralph, B.L. Weber, D.A. Merritt, J.R. Jordon, D.E. Wolfe, D.B. Wuertz, J.E. Gaynor, S.A. McGlaughlin, R.R. Rogers, A.C. Riddle, and T.S. Dye, Contamination of wind profiler data by migrating birds: Characteristics of corrupted data and potential solutions, *Journal of Atmospheric and Oceanic Technology*, 12, 449-467, 1995.
- Williams, E.J., and E.A. Davidson, An intercomparison of two chamber methods for the determination of emission of nitric oxide from soil, *Atmospheric Environment*, 27A (14), 2107-2113, 1993.
- Williams, C., W. Ecklund, and K. Gage, Classification of precipitating clouds in the tropics using 915 MHz wind profilers, *Journal of Atmospheric and Oceanic Technology*, 12 (5), 996-1012, 1995.
- Williams, C.R., and S.K. Avery, Diurnal nonmigrating tidal oscillations forced by deep convective clouds, *Journal of Geophysical Research*, 101 (D2), 4079-4091, 1996.
- Williams, C.R., and S.K. Avery, Diurnal winds observed in the tropical troposphere using 50 MHz wind profilers, *Journal of Geophysical Research*, 101 (D10), 15051-15060, 1996.
- Williams, C.R., Principal component analysis of wind profiler observations, *Journal of Atmospheric and Oceanic Technology*, 14 (3.1), 386-395, 1997.
- Williams, J., J.M. Roberts, F.C. Fehsenfeld, S.B. Bertman, M.P. Buhr, P.D. Goldan, G. Hübler, W.C. Kuster, T.B. Ryerson, M. Trainer, and V. Young, Regional ozone from biogenic hydrocarbons deduced from airborne measurements of PAN, PPN, and MPAN, *Geophysical Research Letters*, 24 (9), 1099-1102, 1997.
- Williams, E.J., J.M. Roberts, K. Baumann, S.B. Bertman, S. Buhr, R.B. Norton, and F.C. Fehsenfeld, Variations in NO_y composition at Idaho Hill, Colorado, *Journal of Geophysical Research*, 102 (D5), 6297-6314, 1997.
- Williams, E.J., K. Baumann, J.M. Roberts, S.B. Bertman, R.B. Norton, F.C. Fehsenfeld, S.R. Springston, L.J. Nunnermacker, L. Newman, K. Olszyna, J. Meagher, B. Bartsell, E. Edgerton, J.R. Pearson, and M.O. Rodgers, Intercomparison of ground-based NO_y measurement techniques, *Journal of Geophysical Research*, 103 (D17), 22261-22280, 1998.
- Williams, C.R., W.L. Ecklund, P.E. Johnston, and K.S. Gage, Cluster analysis techniques to separate air motion and hydrometeors in vertical incident profiler observations, *Journal of Atmospheric and Oceanic Technology*, 17 (7), 949-962, 2000.
- Williams, C.R., A. Kruger, A. Tokay, R. Cifelli, W.F. Krajewski, and C. Kummerow, Comparison of simultaneous rain drop size distributions estimated from two surface disdrometers and a UHF profiler, *Geophysical Research Letters*, 27 (12), 1763-1766, 2000.
- Williams, J., J.M. Roberts, S.B. Bertman, C.A. Stroud, F.C. Fehsenfeld, K. Baumann, M.P. Buhr, K. Knapp, P.C. Murphy, M. Nowick, and E.J. Williams, A method for the airborne measurement of PAN, PPN, and MPAN, *Journal of Geophysical Research*, 105 (D23), 28943-28960, 2000.
- Williams, C.R., Simultaneous ambient air motion and raindrop size distributions retrieved from UHF vertical incident profiler observations, *Radio Science*, 37 (2), doi: 10.1029/2000RS002603, 2002.
- Winningham, J.D., J.R. Sharber, R.A. Frahm, J.L. Burch, N. Eaker, R.K. Black, V.A. Blevins, J.P. Andrews, J. Rudzki, M.J. Sablik,

- D.L. Chenette, D.W. Datlowe, E.E. Gaines, W.I. Imhof, R.W. Nightingale, J.B. Reagan, R.M. Robinson, T.L. Schumaker, E.G. Shelley, R.R. Vondrak, H.D. Voss, P.F. Bythrow, B.J. Anderson, T.A. Potemra, L.J. Zanetti, D.B. Holland, M.H. Rees, D. Lummerzheim, G.C. Reid, R.G. Roble, C.R. Clauer, and P.M. Banks, The UARS particle environment monitor, *Journal of Geophysical Research*, 98 (D6), 10649-10666, 1993.
- Wise, M.E., S.D. Brooks, R.M. Garland, D.J. Cziczo, S.T. Martin, and M.A. Tolbert, Solubility and freezing effect of Fe^{2+} and Mg^{2+} in H_2SO_4 solutions representative of upper tropospheric and lower stratospheric sulfate particles, *Journal of Geophysical Research*, 108 (D14), 4434, doi:10.1029/2003JD003420, 2003.
- Wofsy, S.C., K.A. Boering, B.C. Daube Jr., M.B. McElroy, M. Loewenstein, J.R. Podolske, J.W. Elkins, G.S. Dutton, and D.W. Fahey, Vertical transport rates in the stratosphere in 1993 from observations of CO_2 , N_2O and CH_4 , *Geophysical Research Letters*, 21, 2571-2574, 1994.
- Wood, S.W., D.J. Keep, C.R. Burnett, and E.B. Burnett, Column abundance measurements of atmospheric hydroxyl at 45° South, *Geophysical Research Letters*, 21 (15), 1607-1610, 1994.
- Woodbridge, E.L., J.W. Elkins, D.W. Fahey, L.E. Heidt, S. Solomon, T.J. Baring, T.M. Gilpin, W.H. Pollock, S.M. Schauffler, E.L. Atlas, M. Loewenstein, J.R. Podolske, C.R. Webster, R.D. May, J.M. Gilligan, S.A. Montzka, K.A. Boering, and R.J. Salawitch, Estimates of total organic and inorganic chlorine in the lower stratosphere from in situ and flask measurements during AASE II, *Journal of Geophysical Research*, 100 (D2), 3057-3064, 1995.
- Wotawa, G., and M. Trainer, The influence of Canadian forest fires on pollutant concentrations in the United States, *Science*, 288, 324-328, 2000.
- Xu, Y., A.R.W. McKellar, J.B. Burkholder, and J.J. Orlando, High-resolution infrared spectrum the ν_1 and ν_3 bands of dichlorine monoxide Cl_2O , *Journal of Molecular Spectroscopy*, 175, 68-72, 1996.
- Yang, J., R.E. Honrath, M.C. Peterson, D.D. Parrish, and M. Warshawsky, A study of peroxy radical and ozone photochemistry at a remote northern Atlantic coastal site, *Journal of Geophysical Research*, submitted, 2003.
- Yokelson, R.J., J.B. Burkholder, R.W. Fox, R.K. Talukdar, and A.R. Ravishankara, Temperature dependence of the NO_3 absorption spectrum, *Journal of Physical Chemistry*, 98, 13144-13150, 1994.
- Yokelson, R.J., J.B. Burkholder, L. Goldfarb, R.W. Fox, M.K. Gilles, and A.R. Ravishankara, Temperature dependent rate coefficient for the $\text{Cl} + \text{ClONO}_2$ reactions, *Journal of Physical Chemistry*, 99, 13976-13983, 1995.
- Yokelson, R.J., J.B. Burkholder, R.W. Fox, and A.R. Ravishankara, Photodissociation of ClONO_2 : 2, Time-resolved absorption studies of product quantum yields, *Journal of Physical Chemistry A*, 101 (36), 6667-6678, 1997.
- Zahn, A., C.A.M. Brenninkmeijer, P.J. Crutzen, D.D. Parrish, D.T. Sueper, G. Heinrich, H. Güsten, H. Fischer, M. Hermann, and J. Heintzenberg, Electrical discharge source for tropospheric "ozone-rich transients", *Journal of Geophysical Research*, 107 (D22), 4638, doi:10.1029/2002JD002345, 2002.
- Zamora, R.J., S. Solomon, E.G. Dutton, J.W. Bao, M. Trainer, R.W. Portmann, A.B. White, D.W. Nelson, and R.T. McNider, Comparing MM5 radiative fluxes with observations gathered during the 1995 and 1999 Nashville southern oxidants studies, *Journal of Geophysical Research*, 108 (D2), 4050, doi:10.1029/2002JD002122, 2003.
- Zander, R., S. Solomon, E. Mahieu, A. Goldman, C.P. Rinsland, M.R. Gunson, M.C. Abrams, A.Y. Chang, R.J. Salawitch, H.A. Michelsen, M.J. Newchurch, and G.P. Stiller, Increase of stratospheric carbon tetrafluoride (CF_4) based on ATMOS observations from space, *Geophysical Research Letters*, 23 (17), 2353-2356, 1996.
- Zanis, P., T. Trickl, A. Stohl, H. Wernli, O. Cooper, C. Zerefos, H. Gaeggeler, C. Schnabel, L. Tobler, P.W. Kubik, a. Priller, H.E. Scheel, H.J. Kanter, P. Cristofanelli, C. Forster, P. James, E. Gerasopoulos, a. Delcloo, A. Papayannis, and H. Claude, Forecast, observation and modelling of a deep stratospheric intrusion event over Europe, *Atmospheric Chemistry and Physics*, 3, 763-777, 2003.
- Zheng, J., A.J. Weinheimer, B.A. Ridley, S.C. Liu, G.W. Sachse, B.E. Anderson, and J.E. Collins Jr., An analysis of aircraft exhaust plumes from accidental encounters, *Geophysical Research Letters*, 21 (23), 2579-2582, 1994.
- Zheng, J., A.J. Weinheimer, B.A. Ridley, S.C. Liu, G.W. Sachse, B.E. Anderson, and J.E. Collins, Jr., Analysis of small- and large-scale increases of reactive nitrogen observed during the second Airborne Arctic Stratospheric Expedition, *Journal of Geophysical Research*, 101 (D22), 28805-28816, 1996.